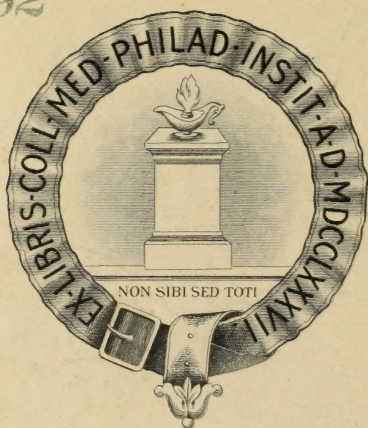




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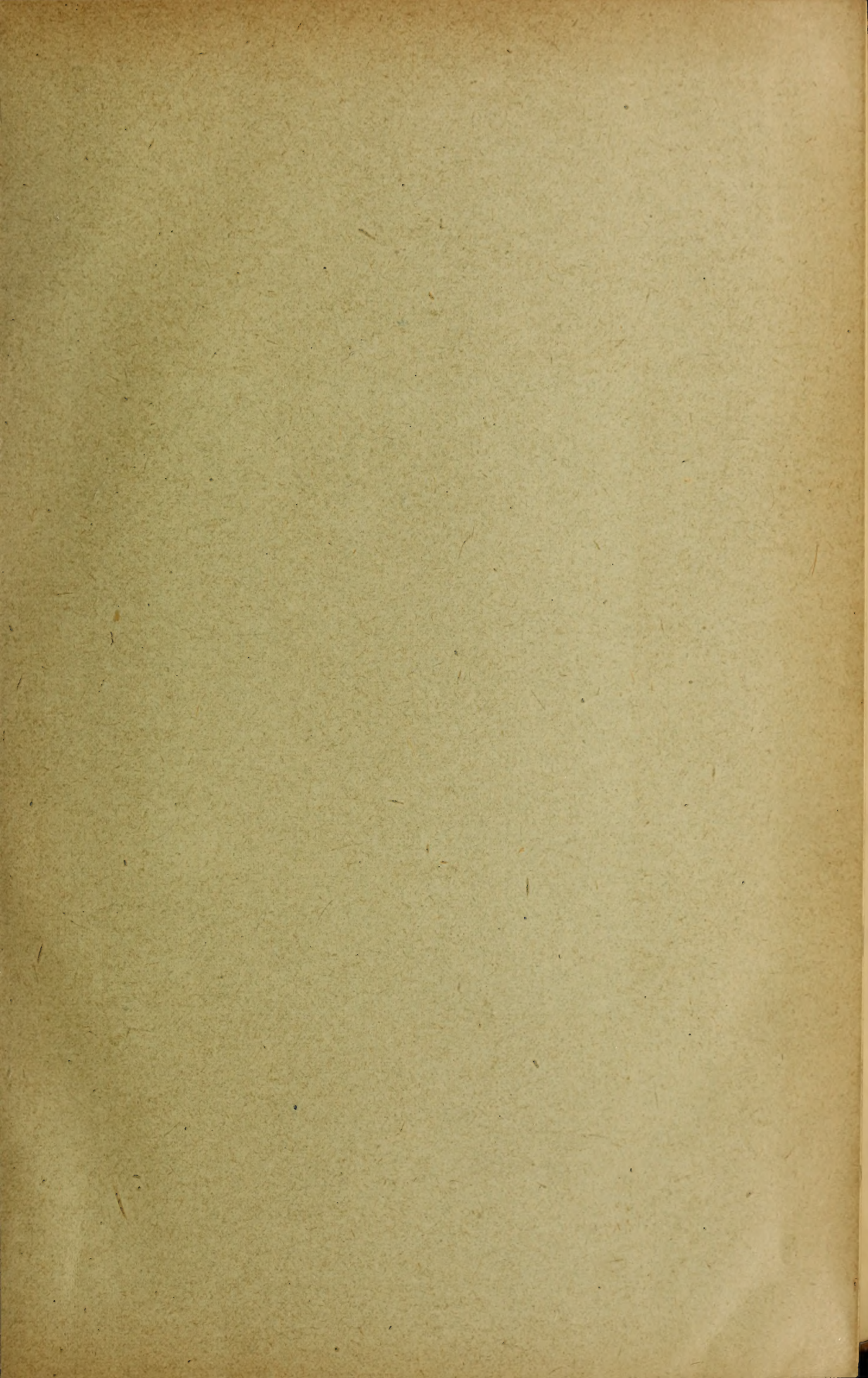



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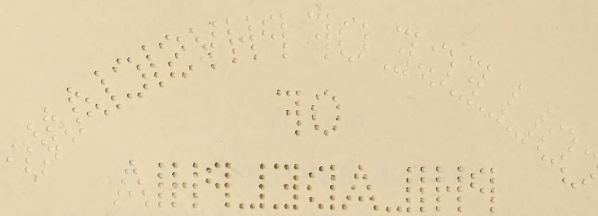
CLARENCE BARTLETT, M. D.

ASSISTANT EDITOR: G. HARLAN WELLS, M. D.

PHILADELPHIA,

1910.

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THE HAHNEMANNIAN MONTHLY.

JANUARY, 1910.

THE FAILURE OF MODERN SCHOOL METHODS.

BY

CHARLES PLATT, M. D., PHILADELPHIA.

(Read at the Pennsylvania Homœopathic State Medical Society Meeting, Scranton, Pa., September 23, 1909.)

My excuse for presenting this paper to the State Medical Society lies in the belief that the physician's responsibility to the community does not rest solely in the prevention and cure of disease, nor in the care of a man's body. Man is a composite of three entities—body, mind and soul, and society, recognizing that each of these parts must be trained and cared for, has developed for the body the medical profession; for the mind, the school, and for the soul, the church. But these three, body, mind and soul, together make one, and no part of this trinity can be considered as entirely separate from the other parts. It may be asked, Have we, as physicians, then, to do with the soul? Yes, for while this part of man is of the supernatural rather than the natural, our brothers of the church will thank us if we aid them by instructing our patients as to the material wages of sin, and advise them as to their duties in the family and community. There is, moreover, that very real relation between body and soul shown in the over-powering influence of the physical condition in determining the development of the criminal.

It is not of the soul's relation to the body, however, that I wish now to speak, but of the mind—the body's ego, and of the interest we as physicians should take in the work of the schools.

I do not intend to refer to the disease-disseminating drinking

cup, nor to the destruction of eye-sight by faultily placed black-boards, nor to the deformed skeletons from badly constructed seats and desks, nor even to the evils of forced mental labor at the developmental period of life. I shall speak simply of the unsatisfactory results obtained by the modern pedagogical methods.

It will be granted without argument that the mind may influence the body. Does our modern school system so educate the mind that this influence shall be for the best? To get this desirable effect the education must be real—the school must so train and develop the mind that this shall be capable of sane, judicial, logical thought, of deduction and induction. Do our schools do this? They are not even trying to do it! They are trying to fill the pupil with knowledge, which is a very different thing, and, in the elementary schools, at least, even inimical to the truer education. Not only is the method wrong but the work given is overwhelming in quantity, and detrimental in this way to the child's mental growth. The school boards do not think so, but in accepting, as they do, a majority of correct answers in a school test as evidence that the course is not too difficult, they fail to recognize the fact that, owing to the undeveloped state of the child's mind, a correct answer is no criterion of his understanding of that answer. It is needless to add that knowledge without understanding, if one can imagine such a thing, is short-lived, and that in the end, the child so taught will have neither understanding nor knowledge.

Miss Caroline B. Le Row has collected many interesting answers to questions asked in school examinations. Let me give you some of these; they are instructive, and illustrate in part what I have to say:

Ammonia, the food of the gods.

Emolument, a headstone to a grave.

Ipecac, a man who likes a good dinner.

Republican, a sinner mentioned in the Bible.

Asphyxia, a grumbling, fussy temper.

Circle, a round straight line with a hole in the middle.

Things which are equal to each other are equal to anything else.

To find the number of square feet in a room you multiply the room by the number of feet. The product is the result.

The Rocky Mountains are on the western side of Philadelphia.

Cape Hatteras is a vast body of water surrounded by land and flowing into the Gulf of Mexico.

Mason and Dixon's line is the Equator.

Ireland is called the Emigrant Isle because it is so beautiful and green.

The Puritans found an insane asylum in the wilds of America.

Socrates destroyed some statues and had to drink shamrock.

An interval of music is the distance on the key-board from one piano to the next.

Congress is divided into civilized, half-civilized and savage.

We have an upper and a lower skin. The lower skin moves all the time, and the upper skin moves when we do.

The body is mostly composed of water, and about one-half is avaricious tissue.

The chyle flows up the middle of the backbone and reaches the heart where it meets the oxygen and is purified.

In the stomach starch is changed to cane sugar and cane sugar to sugar cane.

Now, what do these answers show? A lack of knowledge, certainly, but more than that—an absolute lack of understanding. Some are based upon a confusion of sound, others upon an association of ideas; few only show real incapacity, but they all show, notably and lamentably, a hopeless dependence upon the routine memorizing of supposed facts, and an utter lack of effort at reasoning. The majority of these answers are directly the result of false methods of instruction—they are the system's fault, not the pupil's. The child who says that Ireland is called the Emigrant Isle because it is so beautiful and green, shows in a sentence the hopelessness of the situation. There is, of course, the association of sound in the words *emigrant* and *emerald*—the pupil gets it emigrant because the word was to him the more familiar of the two, and then he goes calmly on to say that it is so called because it is so beautiful and green. He does not himself see any connection, but that does not matter to him in school work; he is accustomed to repeat verbatim what the teacher says. It does not make good sense, but neither does much of what he hears. If he had in the beginning any curiosity as to the reason for some of the statements given him to learn, this curiosity has become dulled by the flow of informing knowledge poured without cessation into his unwilling ears. It is a blessing that boys have fathers

and mothers of whom they may ask questions, and thus obtain some education in spite of the schools.

Again, have we any right to assume that the boy who may have answered correctly, that Ireland was called the Emerald Isle because it is so beautiful and green, has really any more knowledge or is possessed of any better mental state than the one who called it the Emigrant Isle for the same reason? I think not. The correct answer indicates merely a fortuitous catching of the word—not any greater mental capacity. The word *because* was probably used in both cases with the same absolute indifference to the implied cause and effect.

A teacher, a patient of mine, told me that she had been greatly shamed because a visiting examiner had asked her children, averaging about ten years of age, the characteristics of the Malay forehead. None of the pupils were able to answer correctly and the teacher had been criticised.

What a waste of time! What a waste of our money as tax-payers! In 1906, the United States expended \$307,765,659 in public schools. How much of this, I wonder, was well invested! We find in the reports of one school such items as, Cray fish, for the biological department, \$8.50 per 100 (the retail market price is about \$3.00). Frogs were purchased at \$10.00 per 100. For snails they expended \$15.00 per 100, and for rats, \$50.00 per 100. However, I am unconcerned with the financial outlay, education at three hundred millions would be cheap if it yielded the proper results—that it does not, is my contention.

Is our nation, with its proud school system, an educated nation? Read the papers. To-day we are hardly perceptibly removed from the witch-burnings of Salem; the wildest superstitions are current; you can not stretch the credibility of the public to the breaking point; anything and everything, however manifestly absurd, is food for newspaper comment and for argument. A few years ago one of the Philadelphia papers conducted a discussion as to whether the earth was round or flat, and continued it for weeks, *ad nauseam*. Every prediction of the world's end meets with hysterical acceptance by hosts of people; prophesies of earthquakes, of tidal waves, and of other public calamities, excite a fearful interest, and occupy a first page position in our papers. Mrs. Eddy has many thousands of devoted followers among the "educated" classes.

What does it all mean? To my mind it means the failure of the educational system. But let us take more concrete examples.

Wanamaker, in one of his stores, employs from fifty to seventy-five girls in the audit department. These girls, averaging about eighteen years of age, and nearly all grammar school graduates, cannot be depended upon to add a column of figures correctly until they have had months of practice. Miss Alida Williams, a New York principal, seeking to know how the school children were succeeding in business life, addressed inquiries to a number of firms. The testimony, she says, was interestingly and convincingly unanimous—that the writing of the children was illegible if rapid, and slow if legible; that they could not use the fundamental rules of arithmetic either accurately or quickly (as one employer says, “They need a day off to add a column, and then bring back the wrong answer”); they have no initiative, requiring constant direction; they cannot take down correctly simple dictation; they appear unfamiliar with letter-writing forms; their spelling of common words is unauthorized by the dictionary, and—they are very ill-mannered.

My own experience of fifteen years as a teacher in a medical college has brought me into intimate contact with many young men of high school and college education. I might be a teacher yet had I not become tired—miserably tired of trying to instruct in a science which half the class lacked the mental development to comprehend.

I bring this matter before you, gentlemen, as I have said, because I believe that we as physicians of the body should be broad enough in our assumption of responsibility to include an interest in the body’s major partner in life—the mind. I believe that we should interest ourselves in all that pertains to education, and help make that education so excellent a thing that both body and soul may share in its benefits.

The trouble lies chiefly in the elementary schools—not with the teachers, but with the system. Correct the methods here and the nation will reap a profitable harvest. The average of school-life in the United States is under five years; the majority of children, therefore, never pass the elementary schools, but whether they do or do not, whether they go on to the upper grades or whether they go at once into business life, the result is the same. The successful man of to-morrow is the one who will first forget the false methods of his early school days, and, by his inherent intelligence, educate himself to the needs of life, and to the pleasure of understanding.

APPENDICITIS.

BY

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SCRANTON, PA.

(Read before the Inter-State Medical Society at Elmira, N. Y.)

PRESENTING a paper on such a subject is done with a feeling akin to apology, the subject matter being so old and time-worn as to be almost threadbare. Threadbare it may be; old also, and yet we are satisfied that it is not entirely barren of interest to this Society.

In our opinion, there is no surgical subject, except perhaps cancer, which is of such importance to the field of general medicine and hence of equal importance to both surgeons and internists. There was a time when appendicitis was debatable ground invaded by the surgeons to the dislike of the medical men, then came the time when appendicitis was claimed entirely by the surgical world as their own, ownliest and positive acreage, and medical men roamed it at their peril.

At the present time, however, surgeons and internists are working together with an increased degree of knowledge. This knowledge has been reared from the zeal of the surgical world and is the product of experience gained after many years of labor. As a result of this experience we are able to say to a reasonable degree what class of cases we must operate, must not operate or delay for a time, and even in some cases never operate upon. Briefly, gentlemen, What is the appendix? Where is it and whence came it? Generally in the right iliac fossa attached to the cecum. It is composed of three coats—serous, muscular and mucus. It is nourished in the male by an artery which is a terminal vessel derived from the ileo-colic dextra, a branch of the superior mesenteric. Its veins empty into the mesenteric veins (portal system), the nerve supply comes from the celiac plexus of the sympathetic. In the female it also has a branch from the ovarian artery. This organ being an involution organ its serous coat is the only one having a normal tone, the muscular and mucosa being both below par. The lumen of the appendix at its junction with the cecum is partially closed by a flap of mucus membrane known as Gerlach's valve. During intra-uterine life with the cecum it is located under the liver

and as the cecum descends likewise does the appendix. The descent is due rather to an increase in length of the descending colon. As the length of the colon increases its vessels must also increase proportionately or a folding of the gut will occur. When these vessels fail to increase in length a sharp kink in the appendix occurs and is given as a cause of a form of appendicitis by Blake (Johnson's Surgical Diagnosis). The appendix normally points inward and upward towards the spleen, but may point outward, downward, inward, or may run up back of the cecum and in some instances be attached to the liver. The location of the appendix oftentimes gives rise to peculiar symptoms which are confusing in establishing a diagnosis.

What causes appendicitis? Again has experience and research elucidated and knowledge as to the cause been greatly benefited. In olden times it was seeds or other foreign bodies, and honestly, gentlemen, I know of one fond mother whose only son had an attack,—to remove from canned tomatoes all the seeds before they were prepared for the table. Unfortunately, notwithstanding her care this son was operated upon shortly after and miraculously saved by tapping a walled-off abscess.

Germ. All or any of the pus-producing germs most commonly, however, the "Bacilli Coli Communis," and owing to the fact that the tissues of the appendix are below par it is easy prey to these bacteria. We believe that in males a frequent cause is circulatory disturbance due to the single artery. Trauma is now well established as a cause of the condition. Other causes are atony of the intestines, catarrhal enteritis, typhoid fever, dysentery, syphilis, tuberculosis of the intestines, occasionally foreign bodies may cause it. Deaver reports a case where he found a pin in the appendix which was the cause of the inflammatory condition. Intestinal worms are cited by many as a cause, and recently we saw an article written by Ashurst (*American Journal of Medical Sciences* Oct., 1909,) reporting a case operated by him in which he found oxyuris vermicularis in the appendix. The appendix showed a diseased condition, which to his mind was not caused by the parasites. Intestinal indigestion, to my mind, should be considered as an etiological factor, and we shall, no doubt, hear from Dr. Brewster who believes that in the majority of instances the disease is the result of errors in diet. The part which fecal concretions play as etiological factors is largely problematical and

to our mind has but little to do with it. Fecal concretions are very often found at autopsy when no signs of the condition are present.

One fact slipped my mind, which I wished to mention prior to this paragraph, namely,—that of the physiology of the appendix. In the vast majority of minds this is never thought of. Kelly, in his recent work on the subject, suggests reserving our judgment; and states that a number of organs were formerly considered functionless as the thyroid, thymus and supra-renal bodies, and we may find later that the appendix has some function.

The symptoms of appendicitis vary from the mild, benign symptoms of appendicular colic to the graver forms of gangrenous ulceration with perforation.

The symptoms of acute appendicular colic are well known, and the disease is so readily diagnosed that is seldom mistaken, still in children I have seen the condition overlooked in favor of some form of gastric or intestinal indigestion. Again, when the appendix is pointing in some direction other than the normal the diagnosis may be difficult. The conditions most often confused with appendicitis are gall stones, renal calculi, movable kidney, gastric ulcer, ovarian disease, typhoid fever or a rupture of a typhoid ulcer. As to the symptoms of the graver forms, and this is the key to the operative situation, the one symptom we lay particular stress upon in our work is rigidity, particularly in the right rectus low down, as it denotes to our mind a peritoneal condition which may cause a serious menace to life. Of course, a marked elevation of temperature with a decided increase in the pulse rate, vomiting, particularly when the vomited matter is intestinal in character with distention, the "Hippocratic" countenance are all too well known to do any more than simply bring to your notice.

As to the differential diagnosis:

Gall Stones. Pain in the appendix is lower down, is not so paroxysmal in character. Rigidity of the rectus is in the upper quadrant. May have jaundice or the gall-bladder may be tender on palpation.

Renal Calculi. Pain begins in the loin, is referred to the scrotum and knee. Rapidity of the onset. A previous history may be elicited of having passed gravel. In the majority of instances the gastro-intestinal symptoms are not as marked as in appendicitis. A calculus imprisoned in the right ureter

low down could be mistaken for an appendicitis, but the history, the lack of marked tenderness at McBurney's point would help to establish the diagnosis. If still in doubt a cystoscopic examination would reveal the fact that no urine was coming from the right ureter.

Gastric Ulcer. The irritation of the majority of gastric ulcers cause a pyloric spasm, as can also a chronic appendicitis through the reflex action of the sympathetic nervous system. I saw this clearly illustrated two years ago at the Mayo clinic. Dr. W. J. Mayo had a case in his clinic in which the symptoms pointed very clearly to a diagnosis of pyloric spasm. On operating he could find no cause in the stomach which would cause the trouble and in searching for a cause he found a chronic appendicitis with adhesions. Operation removed the symptoms entirely. Recently our interne, Dr. Barratt, called my attention to a case of gastric disorder in the medical ward. The patient, a young man, was unable to retain any food and he complained of severe abdominal pain. He presented no symptoms of ulcer, no gastric dilatation, and, on examination, we found him to be suffering from a chronic appendicitis which was causing a pyloric spasm. On the rest and starvation treatment he improved and he refused operative treatment. Since then his symptoms have all returned and he is about to be operated. The diagnosis can be differentially established by the vomiting which is more pronounced in gastric ulcer and the pain. Palpation will reveal the tenderness in appendicitis to be located in the right iliac fossa. Examination of the stomach contents will help to clear up the diagnosis.

Movable Kidney. Frequently a movable kidney is mistaken for an appendicitis. The fact that the tenderness is not as marked and the nervous symptoms are pronounced in nephrop-tosis and that on examination we find a tumor which is movable and slides under the fingers should make the diagnosis clear. There is generally no rise of temperature and the rigidity is not as marked as it is in the subject under consideration.

Ovarian Disease. It is often a difficult matter to differentiate between ovarian or tubal disease and a diseased appendix. Kelly, in his "Medical Gynecology," states that "Each condition presents characteristic differences and attention to these and the history of the case in its early stages ought to prevent mistakes." He further states that "pain and tenderness exist in both in the lower abdomen, but that in pelvic disease the ten-

derness is lower down and that pressure over Poupart's ligament reveals intense suffering. Vaginal examination showing tenderness on both sides is no doubt due to disease of the uterine adnexa. The character of the pain in its onset is generally different, in appendicitis it is apt to be paroxysmal in character while in pelvic disease it is more steady and less intense. Again pelvic disease is generally accompanied by vaginal discharges." R. T. Morris considers that abdominal rigidity is the principal diagnostic sign between the two. If it is absent appendicitis can be reasonably excluded.

Typhoid Fever. So closely do some cases of typhoid simulate appendicitis that it is often difficult to establish a positive diagnosis. Recently I saw a case of typhoid in which for several days I was at a loss to say positively that it was not appendicitis. In this case the history of a malaise and the slow onset of the symptoms with the toxemic appearance of the patient, no distension and a positive "Widal" several days later was all that saved the lady from an operation. The history of this case I hope establishes the differential diagnosis. In the early days of appendicial history I am satisfied that many lives were sacrificed by a diagnosis of fulminating typhoid and went on to an early death.

Now, as to the treatment. Gentlemen, I do not wish to be misquoted nor misunderstood, in the vast majority of instances appendicitis is a surgical disease, but I can only say in all honesty after operating many cases that a great many might have avoided operation at that particular time, whether it would have jeopardized their lives by not operating I can only hope that it would have. As to general treatment: rest, both absolute and intestinal, prohibit all food and all feeding. A small amount of water may be given to allay the thirst, a simple enema given high often affords relief. As to medicine: our experience has been that bryonia and echinacea have been the ones most often used. As to how much value they have been we can not say, for we know of many, many cases treated without any remedies and the mortality rate is as low as it is following the giving of medicines. This form of treatment is that followed by Dr. Oschner, of the Augustanna Hospital in Chicago, in acute cases and is termed the rest and starvation treatment. In a paper by Dr. R. C. Coffey in the *Medical Journal* of New York, he publishes statistics showing the mortality rate following the operative methods of Deaver and Richardson who ad-

vocate operation in every case and of the Mayos and Oschner who advocate the rest and starvation treatment. They are as follows: Oschner in a thousand cases lost 2.2 per cent.; Mayos in five hundred and thirty-six cases, .9 per cent.; Deaver, five hundred and sixty-six cases, 5 per cent.; and Richardson in a large series of cases 5 per cent. One must bear in mind, however, that the Mayos see very few pus cases, and hence their cases are not as serious as those of Deaver. When we say that we have operated cases which we are satisfied might have avoided operation at that time and that generally we have all operated too often, I feel that we should all explain why and give our reasons for operative interference. Given a case of acute appendicitis where vomiting and pain, a slight increase of temperature and pulse rate are the only symptoms, we follow the rest and starvation treatment and watch the case carefully. When general improvement follows these measures, as in the majority of instances it does, we believe it to be good surgical judgment to wait, and if we operate at all to do it after the subsidence of acute symptoms. If, however, the case shows a tendency after from twelve to twenty-four hours to grow progressively worse with a marked rise in the temperature and pulse rate the pain and tenderness showing a tendency to radiate and the rigidity of the right rectus low down to become marked we do not feel like waiting and urge an immediate operation. I again express the hope of not being misunderstood and further hope that no one, particularly those who are not doing much surgery and the general practitioner, will see in this paper an excuse for not operating. We feel that it is possible to properly classify this condition so that many cases in the future will be able to avoid active surgery. I can not help but feel, however, that there are many cases of acute congestive appendicitis which are improved by general measures and therapeutics, go on to recovery and never have another attack.

As to the operative treatment, you are all familiar with the various types of operation performed, and hence we will not go into the subject fully. In females, in cases which we have every reason to believe are clean, we have been following the right rectus route, incising the skin at the outer border of the right rectus and the aponeurosis, lifting up the muscle and incising the posterior sheath of the aponeurosis and the peritoneum in the middle of the muscle. This method, we believe, to be of two-fold value: first, that it enables us to gain access

to the tubes and ovaries with greater freedom and that in closing up we reduce the possibility of hernia to a minimum. In clean cases in males we follow the grid-iron method, being particularly careful to avoid the right ilio-inguinal nerve. In pus cases we make a straight through and through incision and when necessary to drain we have lately been draining through a separate incision, namely, establishing stab wound drainage.

Now, some one may say, but what as to the after-treatment? In clean cases as near nothing as our patient will stand. If distended a simple or compound enema given high to promote the passage of gas. If much pain, a hypodermic injection of morph. sulph. grs. $\frac{1}{4}$ in combination with atropia the first night. Some water, hot tea or beer when nausea ceases. In from thirty-six to forty-eight hours, if no contrary indications are present, we put our patients on a low selected diet. Within the next few days we give two ounces of castor oil after which we place them on a medium diet. Generally we allow them out of bed in from six to seven days and thus far we have had splendid results. In pus cases the after-treatment is directed toward the dilution and slow absorption of the poisonous material. To accomplish this we place our patients in the Fowler position and use salt solution per the rectum following the method of Murphy which is known as Murphy's entero-clysis. Of course, the indications for stimulation are marked in many cases and one must follow their own judgment. I firmly believe that in this class of cases the homœopathic remedies are of great value and should be used as indicated.

Apropos of this subject we would like to report that in the last five years we have operated on eighty-five cases and due to our good fortune our mortality rate has been "nil."

We would like to report some of the unusual cases.

Case No. 15.—J. F., school girl; age 18. Previous health good. Illness was ushered in by an attack of tonsilitis. After two days her temperature became normal. Bowels slightly constipated. Menstruating. Menstruation suddenly ceased, followed by terrific abdominal pain and vomiting. Lower right abdominal quadrant rigid. Operation advised but refused. Two days later symptoms were very much aggravated and family finally consented to an operation. Operation—straight through and through incision which revealed a gangrenous appendix, cecum and two inches of ilium. Removal of gangrenous appendix with resection. The wound was packed.

Packing removed four days later. Wound drained freely. Fecal fistula resulted but finally healed and patient made an uneventful recovery.

Case No. 22.—Mrs. S.; age 30; housewife. Recurrent appendicitis. Right rectus incision (clean case). Recovery uneventful. Was up and about for two weeks when she developed a phlebitis of left leg which persisted for some time.

Case No. 28.—S. D.; female; age 26; housemaid. The diagnosis of chronic appendicitis was made by two prominent surgeons in which we concurred. Operation—right rectus incision. Appendix found slightly congested and enlarged but harmless. Searching for other causes which would account for her symptoms we found a movable right kidney. Anchored same with the removal of all symptoms.

Case No. 32.—G. J.; age 9; school girl. Was operated sixteen months previously for calculus of right kidney. Following this operation she had frequent attacks of abdominal pain accompanied with vomiting. We saw her in an attack; her temperature was 103.2; pulse 140; was vomiting. She complained of pain in the right lower abdomen which was rigid. Her face was hectic, and gave a history of night sweats. She also had pain in her left loin. Her urine was very cloudy, due to a large amount of pus. Diagnosis pyo-nephrosis complicated by appendicitis. Operation—removal of left kidney, from which her recovery was uneventful. Although in our anxiety to finish the operation the subject being a frail little lady we neglected to ligate the ureter. Ten days later we had to operate again owing to another attack of acute appendicitis; since then three years have elapsed and the child is perfectly normal in every way. Her increase in weight has been remarkable.

Case No. 40.—A. S.; age 12; school boy. Presented symptoms for several years of pain in right iliac fossa accompanied by vomiting, rise of temperature and pulse rate. When we saw him the diagnosis was not clear; the symptoms, however, pointed to an appendicitis, but the pain extended up through right chest. His temperature was running a septic course. Operation—revealed a tubercular appendicitis and tubercular peritonitis. Patient made a rather slow recovery. He died two years later from scarlet fever.

Case No. 43.—J. E.; female; age 14; mill hand. Saw her in consultation with Dr. Severson. She had been sick for two weeks and her symptoms indicated typhoid. There was no

roseola and her blood did not react to the Widal test. When I saw her she was vomiting. Temperature was 103.5; pulse 138. Abdomen was distended and was rigid in the right lower quadrant. Operation—through and through incision, revealed a very much inflamed appendix and cecum. Recovery uneventful.

Case No. 48.—C. S.; age 20; tinner. Sick some ten days. His attending physician advised operation which was refused. He finally consented, however, and was sent to the hospital. Condition on admission was very poor, symptoms indicating a marked peritonitis. The operation—straight through and through incision which revealed a large appendicial abscess; evacuated a large amount of pus, removed appendix, instituted drainage and partially sutured wound. This patient's recovery was slow and was complicated by a fecal fistula which resisted treatment, until my staff assistant, Dr. H. S. Mauser, by the use of labaracques solution healed it up. A year later I was compelled to operate on him for a hernia which was the result of impaired wound healing.

Case No. 38.—M. Q.; age 37; house maid. Operation revealed a large mass on the right side which included tube, ovary and appendix. Free pus in the abdominal cavity. The intestines were covered with a flaky exudate. We removed the mass after a great deal of trouble, partially eviscerated her and carefully mopped out the abdominal cavity. We also flushed the same with a large amount of salt solution. We established free stab wound drainage, sewed up wound. Patient's condition after operation was very poor and her after-treatment consisted of the Fowler position and the use of salt solution, following Murphy's method. Patient recovered.

Case No. 76.—B. McC.; female; age 17. Acute attack of ten days' duration. Operation delayed. Cause of delay unknown. Was in the hospital four days before operation. Incision straight through and through. We were unable to locate appendix in the iliac fossa or pelvis; we found it running upward behind the colon. At a point about three inches below the liver we tapped a large abscess. We evacuated a large quantity of foul-smelling pus. Appendix not removed. Drainage established and wound partially sutured. After-treatment: Fowler position; Murphy entero-clysis and recovery.

Case No. 72.—S. S.; female; age 32; house work. Admitted to hospital some weeks previous at which time she was treat-

ed for a renal calculus and bowel obstruction from which she made a partial recovery. When we saw her she was doubled up by pain which was in the lower abdominal cavity and was worse on the right side. She was running a slight temperature. Her lower abdomen was rigid. Bowels constipated. Vaginal examination was negative. She insisted on being operated. Incision right rectus. We found adhesions everywhere, loop of ilium kinked upon itself and adherent to the uterus. Marked adhesions between intestines. Found appendix buried in a mass of adhesions. Removed, broke up adhesions, sutured raw surfaces, established stab wound drainage and closed up wound. After-treatment: Fowler position; Murphy enteroclysis. Recovery. Patient after being removed to her home developed a phlebitis.

Case No. 83.—Mrs. W.; age 27; housewife. Was seen in consultation after an illness of one week. Her illness began with symptoms of a painful menstrual epoch. When we saw her her abdomen was distended and the rigidity of the right rectus low down was most marked. She was vomiting and had a temperature of 103.2; pulse 132. *Facies abdominalis*. We advised operation, but our prognosis was doubtful. Operation straight through and through incision. Found appendix imbedded in dense adhesions and it was impossible to deliver it into the wound. We were compelled to amputate it from the cecum and carry our dissection downward back of the colon. After liberating perhaps four inches we tapped a large abscess, cut off appendix, instituted drainage and partially sutured wound. After-treatment: Fowler position; Murphy enteroclysis.

Case No. 85.—H. S.; age 20; machinist. Illness of three days' duration. Saw patient in consultation with Dr. Berlinghof. His abdomen was distended and rigid, the point of greatest tenderness was to the left of the median line. He gave a history of having been struck in the lower abdomen and immediately was seized with a violent pain. His temperature was 103 and pulse was very rapid. Operation—straight through and through incision and on incising the peritoneum we found a large mass in the omentum from which pus was oozing into the abdominal cavity. Upon delivering this mass into the wound we found it to contain the appendix. Same was removed with the institution of drainage and the patient is making an uneventful recovery.

This, gentlemen, finishes the narration of our subject and our hope is that we have been sufficiently able to create a degree of interest which will bring about a discussion.

I wish to express my thanks for the assistance gained from the *New York Medical Journal*, *The American Journal of Surgery*, *The Journal of American Medical Science*, Johnson's *Surgical Diagnosis*, Kelly's *Medical Gynecology*, and the *Year Book of Surgery*, edited by Dr. John B. Murphy.

SULPHUR.

(Continued.)

BY

EDUARDO FORNIAS, M. D., PHILADELPHIA.

GASTRIC SECRETION.—I enter now into one of the most important and difficult analyses of *glandular metabolism*. It is with some hesitation, that I undertake to discuss *gastric secretion*, for recent researches on the properties and functions of the *gastric juices*, have plainly demonstrated the complexity of the subject, and how necessary it is to modify already formed opinions about it.

Anyone conversant with the subject must admit that the *actual physiology of digestion* has come to upset many previous theories, and to lead to many conflicting views. *New glands* have been found, *new secreting cells* have been discovered, and it is claimed there is in the stomach a juice which contains a chemical principle (*gastrin*) similarly constituted to that of the well-known *internal secretions*. The *gastric chemism* is better understood to-day. *Pepsine* has been replaced by the natural gastric juices; *gasterine* (gastric juice of the dog), *dyspeptine* (gastric juice of the hog). *Opothrapy* has been found wanting and reduced to narrow limits; and this while the cry still persists:—*clinical results alone must determine the treatment*,—as if the stomach was a chemical pot and its glands drainage tubes. Evidences *in vita* on the one hand, evidences *in vitro* on the other, and, as a final result confusion and distrust. One extols what the other decries, and yet we make progress—*positive progress*. Vitalism, pure experimentation, sym-

tomatology, homœopathicity and unity of the remedy, and the minuteness of the dose, are no longer bugbears of the sceptical. But we all must know disease in order to combat it, and affirm afterward what we have cured, or failed to cure.

In the drug I have selected for a base of my studies, you have a regenerator of the *plasma*, the living fluid upon which cellular function depends, and also a remedy capable of rousing the *vitality of the organic reactions*. We know the animation and vitality of these reactions: a shock, fatigue, or any emotion is immediately followed by a *catabolic disturbance* of the organism. The *machinery of secretion* becomes then disabled and *excretory activity crippled*. Upon which tracks will then the recoil of these blows travel but on the most delicate of the nervous system, found in the *visceral territory of the sympathetic*. Not only *hypersecretion* and *hyposecretion* may be the result of the disturbance, but numberless *hyperæsthesias*, *paræsthesias* and *pains* may accompany the pathological process.

Besides, we should bear in mind that the *circulatory phenomena of the sympathetic nervous system* are dependent upon the presence of *vaso-motor-nerves*, which are derived from the *cerebro-spinal system*. They leave the spinal cord, enter the sympathetic ganglia, and finally terminate in the muscular wall of the blood-vessels, to control there their calibre. Physiology also teaches us that sections of the *pneumogastrics* cause an arrest of the *gastric secretion* and render it abnormal, and that their stimulation excites the secretion. It, likewise, teaches us that the *pneumogastrics* are excited into activity by various reflex agencies. The presence of food in the stomach, the taste of food, even the thought of food, will bring about an increase or decrease of secretion of the *gastric juices*, depending upon the influence these acts exert upon the *par vagum*; and consequently any remedy capable of influencing these nerves may regulate or improve *secretory activity*. This may be accomplished in this manner: the *gastric branches* give sensibility to the mucous coat, and, through the *sympathetic filaments*, which join the *pneumogastric* high up in the neck, give motion to the muscular coat of the stomach. They influence the *secretion of gastric juice*, and aid the process of digestion and absorption from the stomach. Moreover, this great sensitive nerve influences, likewise, the *secretion of the intestine*, and, probably, through anastomosing sympathetic filaments the *secretion of bile*.

It is unnecessary to repeat here that the *chief rôle of secretion* devolves on the *glandular cell*, and that it is the cell the organic element we must stir up into activity to supply the organism, not only with the indispensable secretion, but with an efficient excretion. But with our present knowledge we can well understand the complexity of *gastric secretion*: "The juices secreted by the *glands of the mucosa* vary in composition in the different regions, but the mixed juice is a solution of a proteolytic ferment called *pepsin* in a saline solution, which also contains" a little *free hydrochloric acid* (H. Cl.)—"Halliburton."

It is classical to know that the *gastric juice* can be obtained during the life of an animal by means of a gastric fistula. *Gastric fistulas* have also been made in human beings, either by accidental injury or by surgical operation. It was the observation of a case of gastric fistula by Dr. Beaumont, which gave Dr. Blondlot the idea of making *artificial gastric fistulæ* in animals. Spallanzani, in order to obtain *gastric juice*, made animals swallow sponges, which, withdrawn at once, furnished the product by pressure. Cl. Bernard, to procure pure gastric juice deprived of saliva and alimentary débris, connected to a *gastric fistula* an *œsophagal fistula*. Fremont obtained this juice by completely isolating the stomach provided with its fistula, and stitching the cardia to the pylorus. One can also incise a portion of the stomach and by the aid of appropriated sutures, form an independent accessory pouch communicating with the exterior. Heidenhain has in this manner isolated determined regions of the stomach, such as the pylorus (*pyloric cul-de-sac*), and the greater curvature (*fundal cul-de-sac*); and recently Pawlow has improved this method by preserving the nervous connections of the part removed. And we now make *artificial gastric juice* by mixing weak *hydrochloric acid* (0.2 to 0.4 per cent.) with a glycerin or aqueous extract of the stomach of a recently killed animal. This acts like the normal juice.

It is generally admitted now that *the acid of the gastric juice is H. Cl.*, and this declaration, of course, can be substantiated by biological chemistry. And yet the greater part of *H. Cl.* is in a state of combination, either with *pepsin*, to form *chloridropeptic acid*, or with other *organic matters*. In their analyses we should always bear in mind (Hayen and Winter); the *fixed chloride combinations* with mineral bases; the *chloride combinations* with organic matters, and the *free hydrochloric acid*.

During *gastric digestion*, there are other acids formed, some by fermentation of the food, as the *fatty volatile acids*, but principally the *lactic acid*, which can be easily detected by *Uffelmann's reaction* (canary-yellow coloration with perchloride of iron). These acids contribute by their presence to increase the *acidity of the gastric juice*. The *secretion of H. Cl.* increases also during digestion, the curve of elimination of chlorides reaching the maximum, about 12 hours after a moderate meal. However, according to Pawlow, the *acid secretion* will remain steady during the whole act of digestion, the variations of the *acidity of the gastric juice* being only apparent, and due to a partial neutralization of the *alkalinity of the gastric mucus*. For this reason the acidity varies with the quantity of the secreted juice. Ch. Richet esteems the average acidity of the gastric juice to be 1 gr. 7 per 1000. The acidity found in the gastric juice of certain animals is much higher, and in the fishes it contains, as high as 15 per 1000 of H. Cl.

Pepsin, discovered by Schwann, is like *ptyalin*, a soluble ferment, it acts upon the albuminoids. It can be extracted by infusions of the gastric mucosa and by other different processes. For instance, by precipitation with alcohol of the glycerinated extract of the mucosa (*Von Wittich's process*). But no matter how obtained, the yellow powder is a mixture of many other substances, in which *pure pepsin* is found in a very small amount. Even the activity of the pepsins of commerce is very variable.

The *property of the gastric juice* to coagulate milk is not only due to its acidity, for the curd is not abolished by neutralization of the acid. *Caseification* or *caseation* is under the influence of a ferment called *chymosin* by Payan, and *ferment-lab* by Hammarsten. This ferment is found in large quantities in the *gastric mucosa* of young animals, and in the rennet of ruminants.

When food arrives at the stomach there is *capillary congestion* in the mucous coat of the viscus. The tiny blood-vessels become red and turgid, and the mucosa presents numerous minute gaping orifices through which the glands empty their secretion. But the student should bear in mind that the *gastric juice* secreted by the *fundus glands* is not of the same character as the *gastric juice* secreted by the *pyloric glands*. The *pyloric juice* is distinguished from *true gastric juice* by its reaction, which is alkaline, and by being rich in *pepsin* and *lab-fer-*

ment. Then again, we must not forget that the *epithelial covering of the gastric mucosa* contains numerous *mucous cells* which secrete the *gastric mucus*; an alkaline, flowing viscid product, rich in *mucin*, and which principally accumulates during fasting. Therefore, we have, that the *secretions of the stomach* do not only vary according to the position of the glands, but according to their character and constitution.

It may not be amiss to dilate here on the constitution, distribution and function of these *glandular structures of the stomach*, charged with the essential work of modifying the food for the accomplishment of ulterior changes, and indispensable for its adaptation and assimilation by the tissues.

Two sets of *glands* are distinguished in the stomach, one is found in the fundus, (*glandulæ gastrica propia*), which were formerly called *peptic glands*, a name based upon a function of the glands now called into question. They are chiefly situated in the middle and cardiac thirds of the stomach. The second set is confined to the small pyloric region and are thus called *pyloric glands*. Both are tubular simple glands, sometimes branched, particularly in the pyloric region, which open singly or in groups into minute, pit-like depressions (*gastric pits*), on the free surface of the mucosa. The *fundus glands* contain two kinds of cells, *principal or central cells*, and *parietal or acid cells*. The former are clear, cubical, or short columnar cells, with a granular protoplasm surrounding a spherical nucleus, and are very unstable. The parietal cells are usually much larger, darker, and of a rounded or triangular form; their finely granular protoplasm envelopes a round nucleus. The secretion discharged from all sides of the cell passes into the secretory capillaries, then into one or more short lateral canals, and finally into the lumen of the gland. The *cardiac glands*, mentioned by some authorities, are nothing but simple tubular glands quite close to the cardiac orifice. The *pyloric glands* are furnished almost throughout with columnar cells, containing a spherical nucleus near the base of the cell, which in the intermediate zone, that is, the border zone between the pyloric and the fundus mucous membrane, very closely resemble the principal cells, to which they have been compared. The foregoing description applies to the stomach as it appears when fasting; during digestion the parietal cells are larger, the principal cells, as well as the cells of the pyloric glands, are darker, the nuclei of the latter are pushed nearer to the middle of the

cell, and the secretory capillaries, expanded with increased contents, are wider than in the fasting organ. (Stöhr).

Now, I pass to analyze the digestive power of the stomach, as a whole. It is in this viscus that the *albuminoids* are partially digested and transformed into *peptones*. Here we find combined the most favorable conditions for the digestive act: High temperature, close admixture of food and gastric juice continually secreted and renewed, and disappearance of the digestive products, either by evacuation into the intestine, or by local absorption. But, the sojourn of the food in the stomach is not long enough (4 to 5 hours) for the mass of albuminoids to become all peptonized. Of course, the duration of *gastric digestion* depends more or less on the degree of digestibility of the food taken. For instance, the *fibrin of the blood* seem the substance most readily digested, while the *albumin of boiled egg* is only slowly dissolved. Again, certain substances, such as *cel-lulose, elastic and horny tissue* and the *nuclein* of the cellular nuclei, resist powerfully the action of the gastric juice. (Hédon).

The work of the *gastric glands* is proportionate to the amount of secretion needed. Normally, however, the quantity of *gastric juice* secreted is in proportion with the amount of food ingested; but there is always a modification of both quantity and quality, according to the character of the aliment taken. Thus, the *fundal cul-de-sac of Pawlow*, whose secretion is the reduced image of the secretion of the *grand stomach*, furnishes a juice which varies with the nature of the food. If one gives comparatively to an animal, say, *meat, bread and milk*, it will be found that the quantity of secreted juice is greater with the meat-diet, less with the bread, and still less with the milk. In relation to the *power of digestion of the juice*, it is interesting to note, that the *gastric juice* which dissolves the *bread*, is the richest in pepsin, then, next in order comes that of the *meat*, and the less active is that of the *milk*. The *gastric juice for meat* is then the most abundant and the most acrid. In regard to the *duration of secretion* it is longer for bread than for meat. In regard to the *digestibility of their albuminoids*, they should be classified as follows: *bread, meat, milk*, and the *bread* is the one which requires the most intense digestive labor. We can then plainly see, by these interesting experiments of Chigin, disciple of Pawlow, that due to this especial sensibility, and to

a very delicate reflex mechanism, the *gastric mucosa* adapts its secretion to the food taken.

We all know that the food swallowed with saliva forms in the stomach a paste called *chyme*, that this viscous product is acid, and that the mixture is of a complex composition, but few are familiar with the *synthesis* of this substance. It contains: 1. *starchy food* which has undergone a commencement of transformation in the mouth, and whose *conversion into sugar* may continue in the stomach under the action of the swallowed saliva; 2. the fats upon which the gastric juice does not seem to have any digestive action; 3. the *albuminoids* with their products of transformation; 4. *water, salts, glycose, and lactic acid*; 5. *gases*, derived in part from the air swallowed with saliva, and in part from *intergastric fermentations*; but the *oxygen* being absorbed we only find some traces of it; it is replaced by CO^2 . The other gases are *nitrogen* and a little *hydrogen*.

From what has been stated one may well ask, *Why does not the gastric juice digest the stomach walls themselves*, which we know consist entirely of digestible material (*proteid and gelatin*)? Living tissues, as the leg of a living frog, or the ear of a rabbit, introduced carefully into the stomach by a fistula, are perfectly digested. (Cl. Bernard). Then again, if *self-digestion* takes place after death, why does it not occur during life? These would certainly be pertinent questions to answer, but unfortunately the opinions of high authorities are so conflicting as to make it impossible to satisfy the inquiring mind. Schiff has invoked the protective action of the *gastric mucus*. Hedon believes more probably that the true protective rôle falls on the epithelium of the mucosa. Pavy thought that an explanation of the power of resistance possessed by the living mucosa was to be found in the quantity of blood contained in it. After various experiments he concludes that *the alkalies in the blood prevented self-digestion*, an interpretation that has been commonly accepted, but which Bunge considers incorrect. This authority asserts that the alkalies are not the only things carried to the epithelial cells by the blood. The blood, he says, brings to the glandular cells everything which is necessary to fulfil their function, but if the supply of blood be cut off, those vital functions which resist the action of the *pepsin ferment* must also cease. Why does not the *pancreas* digest itself, as *pancreatic ferment* is effective in a neutral and alkaline solution?

"Here we are face to face with an unsolved problem. But it is not a new one; as the *epithelial cells of the gastric glands* liberate free H. Cl. and still remain alkaline, so the epithelial cells of the *pancreatic gland* secrete the ferment and themselves remain free from ferment."

"We see the same thing going on in every vegetable cell. The cell sap which fills up cavities in the *protoplasm of the cell* is acid, the cell itself, like all contractile protoplasm, is alkaline. The cell sap is frequently brilliantly colored, while the cell itself, which produces the coloring matter, is colorless. But as soon as life ceases, as soon as the vital phenomena, the visible ameboid movements, stop, the incomprehensible power of selecting substances likewise disappears; the laws of diffusion are in no way interfered with, and the protoplasm becomes tinged with coloring matter."

This inexplicable power of separating and distributing the substances, according to the object in view, is possessed by every cell in our bodies, and no less enigmatical is the power of the epithelial cells to direct the H. Cl., liberated from the *chloride of sodium*, always in one direction towards the excretory duct of the *gastric glands*, and the *carbonate of sodium*, formed from the *carbonic acid*, always in the opposite direction, back towards the lymph and blood-vessels. But this enigma confronts us everywhere, and I do believe that so as each cell has the power of attracting or rejecting different materials according to the object they are determined to fulfil and send them forward in different directions, so do I believe also, that our finely divided remedies have the power to penetrate and select the living cells in need of repair and upon which they are destined to act to restore healthy function.

Interesting is it indeed to learn the opinions of eminent authorities regarding the *immunity of the epithelium* "vis-a-vis" of the digestive ferments, which also exists in the intestinal epithelium. Some are now inclined to attribute this immunity to the production by the *living cellular protoplasm* of substances with an antagonistic action, capable of neutralizing the effects of the ferments, and which have been called *antiferments*. It is in such a *medium* that *ascarides* and *tænia* enjoy also immunity.

Do not all these processes allow us to infer there is associated action between the *cellular protoplasm* and the substances ingested, both as food and remedy, and that it is by the activities of *appropriation and rejection* that the normal metabolic

balance is kept? And does not the cellular protoplasm contain the *organogenic elements* necessary to build up and repair tissue, and so maintain the organism in a state of health? Is not SULPHUR, like CARBON, one of these organogenic substances?

At any rate, we should never lose sight of the fact that the *gastric juice* only acts on a single class of food, namely, the *albuminoids*. Fibrin, albumin, casein, etc., are dissolved and transformed in other albuminous substances called *peptones*, which have different properties from those of the original albumin. All *chemical phenomena* take place under the influence of a juice secreted by the tubular glands of the gastric mucosa, and whose properties, secretion and function, should always be considered when studying *gastric disturbances*. Of course, as in the mouth, the work of the stomach is preparatory, to be finally completed in the intestine; and, in all the three cavities, the *chemical operation* is effectually aided by *mechanical intervention*. In fact, some authorities have recently expressed the opinion that the *motor function* of the stomach is more essential than that of *secretion*.

The *troubles due to chemical changes* comprise, in general, alterations of secretion, and, in particular, increase or diminution of the acidity of the gastric juice (*hyperchlorhydria* and *hypochlorhydria*). These are troubles often produced by the ingestion of substances capable of hindering fermentation, such as *alcohol*, *iced drinks*, or salts, which, like the *acetate of lead* and *chloride of mercury*, precipitate the *pepsin*. Motor troubles, on the other hand, arise chiefly, either from atony of the muscular coat of the stomach, or from dilatation of the organ (*See Section on Digestion*). But, *gastric insufficiency* is the principal element of stomach trouble. Almost all *gastritis* finally end in *atrophy of the mucosa*, and above all of *its glands*; and, of course, as a result of this insufficiency we may find *atony* and *dilatation* complicating these cases. In *cancer of the stomach* it comes to increase the tortures of the patient, and in cases of *dyspepsia* it may be the cause or the effect.

In *dyspepsia*, it is not rare to see the trouble enclosed in a true vicious circle, while the decrease of digestive power of the gastric juice allows an open soil to all *abnormal fermentations* (butyric, acetic, lactic, etc.). Then, again, the presence of numerous irritating and toxic products, brought in contact with the gastric mucosa, contribute to maintain and even increase the *glandular lesions*. Consequently it is our duty, with the means

at our command, to break down the vicious circle, and especially so because the passage of a more or less *toxic, fermented chyme* into the bowels will easily create *enteric lesions*, and even muco-membranous entero-colitis.

In *glandular* and *mucous dyspepsias* we find: loss of appetite, great thirst, sour eructations, pyrosis, dyspnoea, and numerous distressing paresthesias, attending the emaciation, debility, constipation, and the dormant skin of old age. Important is also to consider here *gastric dilation*, especially when dependent upon alteration of the stomach walls from *chronic gastritis of alcoholic or cardiac origin*. The student should, likewise, remember that *chronic catarrh of the stomach*, in its mild form, is often symptomatic of *latent tuberculosis*, *Bright's disease*, and *heart trouble*, and a thorough examination of all the organs may avoid a wrong diagnosis.

It is singular how capricious and variable are the symptoms which characterize all *gastric neuroses or dyspepsias*, and how exaggerated they become under moral depressive influences; and this is an imperative reason why homœopathic practitioners must carefully separate the essential from the contingent. No drug of our *Materia Medica* is richer than SULPHUR in abnormal sensations and we may study this remedy with profit, but we must know what we are treating to separate the casual from the essential.

In *nervo-motor dyspepsia* together with epigastric weight and distress we may observe fulness after eating, general malaise, headache, intellectual dulness, constipation, and intestinal gaseous distention, with or without hemorrhoid. This trouble may be directly traced to *hyperacidity* from the acids of fermentation, but there is no excess of acidity in the gastric juice (*hyperchlorhydria*) on the contrary, what we find sometimes is diminution (*hypochlorhydria*).

In *hyperchlorhydric dyspepsia* (secretory neurosis), when the digestive process gives rise to the production of abundant gastric juice, very rich in H. Cl. and ferments, we are concerned with *hyperacidity* or *hyperchlorhydria*, but when the secretion of the gastric juice is intense and continuous, even when the stomach is empty, this *hypersecretion* is called *gastrosucorrhœa*, or Reichmann's disease. The manifestations then comprise: *radiating pains to back at the start of digestion*, spasmodic contractions of the pylorus and cardia, accumulation of gas, pyrosis, occasionally very acid vomiting, intense thirst, ex-

aggrerated appetite, emaciation, and irritability; with the peculiarity, that frequent partaking of food and milk, and especially of bicarbonated water, relieves the pains.

In cases of *dyspepsia*, with acid fermentation and *hyperchlorhydria* we notice the symptoms of *nervo-motor dyspepsia*, plus pyrosis, acidity, vomiting, and splashing sounds. In many *nervous dyspepsias*, vomiting constitutes the only symptom of importance. But here, the history of the case, the absence of mucus in the vomited matter, or in the contents of the stomach (*amyxorrhæa*), as well as the analysis of the stomach contents and the character of the symptoms, etc., will give the key for the diagnosis of *nervous dyspepsia* and *gastric catarrh*. In *simple hyperchlorhydria* with hypersecretion Bouveret has noticed *hematemesis* in 50 per cent. of his cases. It is a *congestive hemorrhage* which relieves the *painful paroxysms* and although of slight importance in itself, it should never be neglected.

There are two secretory disorders frequently ignored which deserve here special mention. One is *amyxorrhæa* (absence of mucus), and the other *achylia gastrica* (absence of ferments of the gastric juice). In *amyxorrhæa*, once the protective action of the *gastric mucus* ceases to exist, we must expect aggravations in the course of such pathological changes as *hyperchlorhydria*, *with or without ulcer*. There is no doubt that the symptoms of *hyperchlorhydria proper* are worse when there is insufficiency of the mucous secretion, which is a more or less accentuated form of *amyxorrhæa*. When the *absence of mucous secretion* complicates *hyperchlorhydria or ulcer*, and this is established by the examination of the contents of the stomach (see "*Homœopathic Recorder*," July 1909, p. 313), next to the indicated remedy, comes the administration, before each meal, of an increasing quantity of *pure olive oil*, which takes the place of the absent mucus and protects the diseased mucous membrane, not only against traumatism, but against the harmful action of H. Cl. Moreover, we should bear in mind that *olive oil* possesses the property of diminishing the acidity of the gastric juice.

In *achylia gastrica* there is total suppression of the gastric ferments (*pepsin and rennin*) and Dr. Upham (*North. Amer. Journal of Homœopathy*, Oct., 1909,) gives as a more exact definition, a condition characterized by the total disappearance of H. Cl., both in the free and the combined states, from the juices of the stomach together with the essential ferments, *pep-*

sin and *rennin*. He claims, that in these cases, there is an absolute failure of the organ to carry out the excretory function, and that as long as the motive power of the stomach is sufficient, and suitable food is capable of being propelled into the intestine, just so long is the case in perfect health, but with the failure of the stomach to advance the chyme, it stagnates. Dr. Upham's paper should certainly be read by those interested in *diseases of the stomach*. Many of his conclusions seem to be in accord with the researches of Mathieu, of Paris, who asserts that, *the vitiations of the gastric secretion are of limited importance when motility is sufficient*, and that owing to the intervention of the intestine and its annexed glands, nutritive equilibrium is easily maintained.

The *syndrome of achylia gastrica*, in confirmed cases, is composed of symptoms of variable intensity and duration, severe enough sometimes to become alarming. The leading feature is an *irritative diarrhœa of frequent occurrence*, and attended by *gastric phenomena* of variable aspect, principally *paresthesis*. The *stools* appear without especial cause, shortly after meals and particularly after breakfast, and are *lienteric* in character. The repeated evacuations seem to drain the organism of its water and as a natural consequence we have *intense thirst*. Gradual catabolic changes render the patient *weak, anæmic* and *pale*, and malnutrition ends in *emaciation* and loss of strength and ambition. The *skin becomes dry and inactive*. Gastric symptoms usually present are *eructations, nausea, and vomiting* of a pasty nature, due to lack of fluids. *Aversion to meat* is a constant attendant; in fact, there is characteristic *distress* after the ingestion of nitrogenous food, and each meal is followed by *epigastric pressure*. This syndrome, of course, may be changed more or less by intercurrent affections, and *old age* may present some especial features.

The student should also bear in mind, that *free hydrochloric acid is absent*: in severe febrile, especially *infectious diseases*, in *carcinoma of the stomach*, in *atrophic gastric catarrh*, and in *pernicious anemia*. On the other hand, *diminished secretion of H. Cl.* occurs: in *anemic conditions* especially severe, in most cases of *chronic gastric catarrh*, during the course of general neuroses (*neurasthenia*), in some types of *mental disorders*, after *prolonged use of alkalis and saline purgatives*, etc.

No less worthy of mention are those *derangements of digestion of early life*, due to three chief causes, namely: *congenital*

debility, artificial feeding and overfeeding, and premature weaning, especially when followed by the abuse of farinaceous (*amylaceous dyspepsia*.) *Overfeeding* is just as injurious as *defective feeding*. The practice of applying the bottle irregularly to appease the cries of the child, who thus has no chance to digest the food during the interval, must be highly condemned. Many of these premature cases are *syphilitic*, or issues of mothers afflicted with privation, or who during pregnancy have suffered from infectious diseases. The *chemism* of this class of patients exhibits very frequently, *repeated vomiting of a very acid fluid*, occurring some time after nursing; and the acidity (*acid dyspepsia*) is rarely due to the presence of free H. Cl., but often to the *acid of fermentation*. In the *dyspepsia* of second childhood, or in the *dyspepsia* of school boys and girls, *hyperpepsia* is sometimes observed, but ordinarily we have slight *hypoepsia*. In the painful forms there is always *hyperchlorhydria*, but very often the *chemism* is variable in the same subject.

Reference should be made here to the variety of *secretory disorders*, observed and described by Eustace Smith, and called by him *mucous disease*. "The derangement, which consists of an *increased secretion of mucus from the whole alimentary canal*, occurs frequently in children, usually after the period of first dentition, and its chief causes are errors of diet and imperfect mastication (often from carious teeth). Previous enfeebling diseases, such as measles and whooping cough are predisposing causes, and in many instances this *mucous disorder* follows a simple gastric catarrh. The *mucus flux*, says this eminent authority, interferes mechanically with digestion and absorption of the food, and by its influence in impeding general nutrition often excites suspicions of the existence of tubercle.

The *digestive and nervous phenomena* are very numerous, and their intensity varies according to the degree to which nutrition is interfered with. It is easy to understand how nutrition must suffer in this disease. The mucus poured out into the stomach and bowels seems to act as a ferment, and to cause decomposition of the food with which it comes into contact. The products of fermentation are gas and acid. The gaseous accumulations excite the abdominal pains and side-stitch which are the source of so many complaints. The acid finding its way into the circulation is distributed throughout the body, and by keeping the tissues in a state of continual irritation, is no doubt

a cause of the unruliness of temper, the nocturnal excitability, and the excessive muscular restlessness which form such prominent features of the disorder. In the alimentary canal the excess of acid has a direct influence upon the digestion of food. It partially coagulates the mucus, so that the alimentary masses being coated more or less completely by thick slimy matter are not properly mixed up with the digestive fluids. A comparatively small part of the food which has been taken is therefore converted into a form in which it is capable of being absorbed; and of that small part a still smaller part is actually taken up by the absorbent vessels, on account of the thick layer of viscid mucus which lines the walls of the bowel, and prevents the veins and the lacteals from performing their functions." This is the lucid explanation given by Eustace Smith of this process of denutrition.

But whether the *dyspepsia* be *mucus*, due to increased secretion of mucus; *hyperchlorhydric* due to abundant gastric secretion rich in H. Cl.; *fermentative*, due to the acids of fermentation; *flatulent* due to production and accumulation of gases; *atonic* from defective gastric secretion and motility; *nervous* characterized by gastric pains, and various reflex nervous phenomena, etc., etc., the fact remains that in all them the outlets to get rid of the offending matters are the mouth and the bowel, and that retention and accumulation must frequently lead to *auto-infection* with all its serious consequences. Moreover, the various syndromes of the different varieties of *dyspepsia*, embrace not only *disorders of secretion and nutrition*, but of *sensation and motion*, with many *reflex nervous phenomena*, and special *modalities* which can only be covered by symptomatic treatment.

There are, of course, many other alterations of *secretory metabolism*, which will be better explained when we come to discuss *intestinal secretion*, for the work of the stomach is after all preparatory and must be terminated in the bowel. *Gastric motility* is another subject which will be better studied when we come to deal with *digestion proper*, and particularly with those derangements due to *motile insufficiency*.

A careful analysis of the various syndromes, considered above, plainly shows that *Sulphur* is a remedy capable of meeting many of the symptoms of *gastric disorder* chiefly due to *insufficient secretion*; and to corroborate this assertion I close

this section of my study with a brief résumé of the corresponding pathogenic effects of this drug :

1. *Difficult digestion.*
2. *Anorexia or Bulimia.*
3. *Malacia. Pica. Fickle appetite.*
4. *Craving for liquor, beer, sweets, or food.*
5. *Aversion to meat, to milk, to fat, to sour things.*
6. *Intense thirst, especially for beer.*
7. *Taste sour or bitter, insipid, foul when awakening in A. M.*
8. *Tongue thickly coated. Fetid breath. Acidity and fermentation.*
9. *Pyrosis. Eructations, sour, bitter, gaseous.*
10. *Regurgitations (acid, mucous, fermented food.) Hic-cough.*
11. *Nausea and Vomiting, in the morning on waking.*
12. *Vomiting of fermented food, mucus, pituita, or bile.*
13. *Vomiting of slimy substances, or watery transparent fluid A. M.*
14. *Gastrorrhæa. Hematemesis. Melena.*
15. *Diarrhæa. Constipation. Both alternately.*
16. *Abdominal plethora. Portal obstruction. Hemor-rhoids.*
17. *Slow digestion. Abdominal distention. Palpitations.*
18. *Flatulence. Difficult breathing. Colic after eating or drinking.*
19. *Rolling, rumbling, splashing sounds.*
20. *Vertigo. Ringing in the ear. Headache.*
21. *Distention of the stomach. Full after eating.*
22. *Weight and fulness of the stomach after meals.*
23. *Epigastric distress (empty, faint feeling 11 A. M.).*
24. *Tension and sensitiveness in the epigastrium.*
25. *Dull pain in the epigastrium, after eating or from pres-sure.*
26. *Pressure, as from stone, after eating.*
27. *Pains, burning, aching, gnawing, constrictive.*
28. *Spasmodic contractions (cardia and pylorus).*
29. *Painful sensitiveness of the stomach and abdomen.*
30. *Swelling and hardness of the liver.*
31. *Impaired general nutrition.*
32. *Progressive emaciation. Irritability. Apathy.*
33. *Debility. Despondency. No ambition.*

34. *Hypochondriasis. Fixed ideas. Paroxysms of anxiety.*

35. *Disturbed sleep. Somnolence or Insomnia.*

36. *Urine scanty, sub-acid, rich in indican.*

37. *Urine fetid, with a greasy surface and pellicles.*

38. *Skin flabby, dry, scurfy, emitting an offensive odor.*

These are the chief symptoms usually observed in connection with digestive troubles due to defective or insufficient secretion.

(*To be continued with Intestinal Secretion.*)

CONTAGIOUS SKIN DISEASES; THEIR RECOGNITION; RELATION TO PUBLIC HEALTH AND PREVENTION OF SPREAD.

BY

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(Read before the Pennsylvania Homeopathic Medical Society, Thursday, Sept. 23, 1909, at Scranton, Pa.)

MR. PRESIDENT, MEMBERS AND GUESTS OF THIS SOCIETY:

It was the very worthy chairman of our Bureau, Dr. Charles Platt, who suggested the title of my paper which I am to have the pleasure of presenting to you. As a prelude, to quote from Dr. Platt: "The thought that has come to my mind is in line with the degree of contagiousness of the more common skin lesions. This is the first question asked by the patient: 'Is it contagious?' and it is not at all well answered by reference to the ordinary text-books. What is the degree of contagiousness; what precautions should be taken to guard other members of the family and the general public?"

It shall be my pleasure then to attempt to portray unto you a few of the more common contagious skin diseases, the diagnostic factors which would enable us to easily recognize them, their relation to public health and methods of prevention of spread.

I shall begin by outlining the salient features which would enable us to correctly diagnose those dermatological affections

which are of a contagious nature; trying at all times to be thoroughly practical, and attempting to give unto you the benefits of my clinical experience as gathered in my private practice and the various institutions with which I am connected.

We can only hope to come to successful conclusions by the most careful observations, the closest scrutiny, and assuming always that our patients are often wont to lead us far, far astray, at times innocently, but with frequently a purpose, which must not be overlooked, so that we in turn must be alert and not be sidetracked by thoughts or suggestions which our patients are apt and want to impress upon us; believing always and most thoroughly in our own ability to come to successful conclusions.

The conditions which I shall mention will be those which are more or less common and those which we would be apt to have to contend with in the routines of our everyday office practices.

Among those to be mentioned are the contagious form of impetigo, its closely related neighbor ecthyma, and dermatitis repens, (a newer dermatologic affection, yet being recognized more and more every day, it is beginning to be considered among the more common dermatoses), impetiginous form of eczema, which is of a contagious character; seborrhœa, which is decidedly transmissible because of the existence of the seborrhœic micro-organism; sycosis vulgaris, the *Tricophyton* infections, tinea versicola, erysipelas, scabies, and lastly syphiloderma.

Having pointed out the diagnostic features of the foregoing conditions, I shall then take up the question of their relation to public health, and shall then give a resume of those thoughts which appeal to me as being most important in the prevention of the spread of skin diseases from the standpoint of the public.

Permit me to begin, then, if you will, with a few factors regarding impetigo contagiosa. I begin with this contagious lesion because of the fact of its intensity of transmission. Of the more acute infective dermatoses I thoroughly believe impetigo contagiosa is the most infective. The disease has its beginning as a small, flat, distinct vesicle containing a serous fluid which in the course of twenty-four hours becomes pustular by secondary infection. The eruption is most usually seen upon the face and hands, yet any part of the body is apt to be infected. In this state of the disease it is rarely recognized as a

beginning attack of impetigo contagiosa. It differs in its relationship to chickenpox, which it closely resembles in this stage, because of the fact that the vesicles contain a fluid which is not decidedly clear as in the vesicle of chickenpox, but is decidedly cloudy in nature. After twenty-four to forty-eight hours rupture occurs, which is followed by the exudation drying upon the skin as thin wafer-like scabs which have that characteristic "stuck on" appearance, being honey yellow in color.



SCABIES.

Persistent type of two months' duration. Failed to respond to repeated local treatments. Responded, however, on the administration of Psorinum 6X—one dose at night. Eruptions were especially persistent in the bend of the elbows and about the wrists. There were, as well, continued out-breaks of pustules after the principal lesions had seemed to disappear. Topical treatment consisted of 20% Sulphur Ointment in Lard as a base and frequent scalding of bed linen and underwear. (Author's case).

Now then, the important point to be remembered in the diagnosis of this condition is that the crusts seem to be very loosely attached; the edges tending to curl up and drop off, leaving behind a reddish, exuding base.

Another point which is apt to lead us astray is the fact that a patient will very frequently be seen having nothing but the presence of these reddish spots,—the scabs having already

dropped off or having been removed by the patient. This presence alone often leads us astray in a diagnosis of the existing condition. If, however, the patient is permitted to return in twenty-four hours, being directed to keep hands off, the characteristic scabs very quickly again present themselves in their true picture.

This is a highly contagious condition because of the fact that the infection is a streptococcic one primarily, and secondarily a staphylococcic one; the disease therefore being of a highly infectious nature and often spreading with great rapidity among the inmates of orphanages and asylums.

Impetigo has occasionally been seen associated with varicella and grafted upon the individual lesions, more or less causing confusion in a proper diagnosis of the existing condition.

It must not be forgotten that the affection often undergoes spontaneous evolution, occasionally clearing up in about two weeks.

Let us next consider for a few moments the question of the contagiousity of ecthyma, that condition which I previously stated was so closely related to impetigo contagiosa because it is considered as a further stage of impetigo, consisting of punched-out ulcers, not very deep, and usually upon the lower limbs; usually in the aged, especially those who are debilitated and poorly nourished. Yet impetigo contagiosa which has undergone an ulcerative change, especially in one who is debilitated, whether young or old, should as well be considered as an ecthyma. This condition naturally is therefore of a contagious nature.

Dermatitis repens, as stated in my opening remarks, is beginning to become more common, especially because of the fact that it is beginning to be more readily recognized, and appeals to me as more or less of a contagious nature,—the micro-organism, however, which is responsible for this condition having not as yet been isolated.

Crocker was the first one to mention dermatitis repens and give us a clinical picture of its condition.

It usually follows an injury upon the hand,—usually picking out the thumb for some unknown reason, but not always so. It presents itself usually as a small bleb which extends peripherally, denuding the skin as it goes. There is a serum-like discharge constantly going on, and the area of demarcation in its advance is surrounded by a white, turbid ring. The base of

the ulcerated condition is usually deeply red in color and highly inflamed. The affection has a tendency to travel. In one case I recall it having traveled up the entire arm on one side and partially up the opposite arm, the patient having in-



TINEA SYCOSIS.
(True Barber's Itch).

A case of long duration having had various sorts of treatment, including X-Ray, which seemed to relieve the existing condition only to again return. Was cured with the internal administration of Sepia 12X and persistent local applications of Ungt. Hydrarg. Ammoniat. 10%. (Courtesy of Dr. A. G. Perkins, Harrisburg, Pa.)

fected himself on the other limb. Dermatitis repens is therefore to be considered of a contagious nature.

Eczema next presents itself for consideration as to whether it is of a contagious nature or not. I shall not at this time, nor is it the intention of this paper, to enter into a discussion as to whether eczema is of a contagious nature. Suffice it to say,

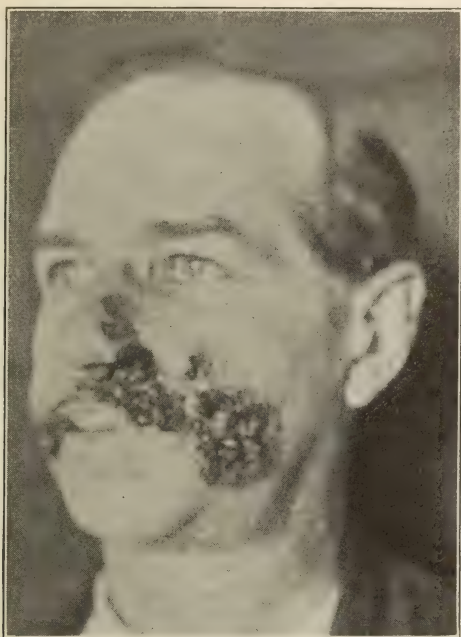
however, that the impetiginous form of the disease to my mind is one of the infectious skin diseases; the impetiginous form of eczema being secondary infection of an already existing eczema due to the entrance primarily of the streptococcus and secondarily of the staphylococcus; therefore practically being the implantation of an impetigo upon an already existing eczema.

I purposely omit at this point the question of the contagibility of the so-called seborrhœic eczemas, as such a condition does not exist. It should be classified as a dermatitis pure and simple with a distinct entity of its own, as it is constantly now being so classified by dermatologic authorities from time to time.

The question as to whether simple seborrhœa is of a contagious nature or not is not entirely a settled one because it has been demonstrated that the micro-bacilli of seborrhœa seem to be a more or less constant factor in all individuals, it having appeared to me that the lowered vitality of the part of the individual giving the micro-bacilli the ability to rapidly multiply and become active,—thus setting up a condition known as a seborrhœic dermatitis, which condition is to be recognized by the preponderance of fatty scales, a highly inflammatory existing condition and the presence of marked itching; the lesions usually being located upon the chest, in between the shoulder blades, in the arm pits and about the hairy parts. Papules are occasionally to be seen which are surmounted with fatty scales scattered here and there, often coalescing to assume many different forms and odd gyrations. These patches are clearly defined by fatty, yellow scales and a decidedly crusty border which, upon being removed, leaves a moist surface. This condition is usually chronic and tends to remain a long time,—attacks often returning where the treatment has not been strenuous enough to entirely annihilate the micro-bacillus which is responsible for the condition. A seborrhœic condition known as "Pityriasis Steatodies" usually presents itself upon the scalp, in the eyebrows, the mustache and bearded region, consisting of small, pale, yellow scales, which upon the scalp are usually known as "dandruff," and which are accompanied with local itching and have a tendency to rapidly recur after their removal. As is well known, the micro-bacilli of Sabouraud are intensely active, and are responsible for universal attacks of baldness, a detailed account of which I have given in the "Evolution of Baldness" in my paper as published

in THE HAHNEMANNIAN and read before the Homœopathic Medical Society of Chester County, at Downingtown.

This condition is contagious. Therefore, the important part played by unsanitary barber shops and unsanitary utensils used in our own homes in the transmission of baldness is a most important problem which calls for radical measures to prevent our



IMPETIGO CONTAGIOSO.

Secondary Infection. Patient having become accustomed to the use of a narcotic to deaden the pain following the result of an acid burn, had repeatedly applied the narcotic which prevented healing, with resulting secondary infection lasting over a period of a year and a half. Had been variously diagnosed and treated as Leues, Lupus, etc. Cured in four weeks by the internal administration of Graphites 2X and the local application of Ungt. Hydrarg. Ammoniat. 10%. (West Philadelphia General Hospital Case).

future generations from having bald and shining tops,—more of which I will have to say later on.

I purposely omit at this point the question of local baldness being of a contagious nature because it has not been definitely determined that alopecias areatas are of a contagious nature. There are authorities who contend that local baldness is of a contagious type. I quote from my paper on "Local Baldness,"

as read before the Delaware County Homœopathic Medical Society at Strath Haven Inn, at Swarthmore, Pa.: "Local baldness occasionally follows impetigo of the scalp and is to be seen associated with the lesions of impetigo upon the face and elsewhere, and is occasionally mistaken for alopecia areata, the presumed contagious form of alopecia areata. There is no doubt that many of the so-called epidemics of alopecia areata are in reality but attacks of local baldness following impetigo. I glean from Volume 18, No. 1 of the *Derm. Zeit.*, Berlin, it was reported that twelve out of thirty-five policemen in a certain police station all developed alopecia areata. It was the custom of the policemen, when off duty, to lie upon the beds occupied by their fellow-policemen when taking a nap during their noon hour. It was noted that the areas were those parts of the scalp which came in direct contact with the pillows. Might not these all have been attacks of impetigo?"

Sycosis vulgaris will be our next theme for a few moments. That this is purely a pustular condition there is no doubt, being a staphylococcic infection of the individual hair follicles, the hair shaft standing out prominently, piercing itself through a small pustule. This condition is naturally contagious. It is a picture which is easily diagnosed, but must not be confounded with a true "Barber's Itch" because it is not a Tricophyton infection, as already mentioned. Yet little harm would come here because of an improper diagnosis because of the fact that both conditions are treated similarly; yet I mention it at this point as being one of the contagious skin manifestations, usually seen upon the bearded regions.

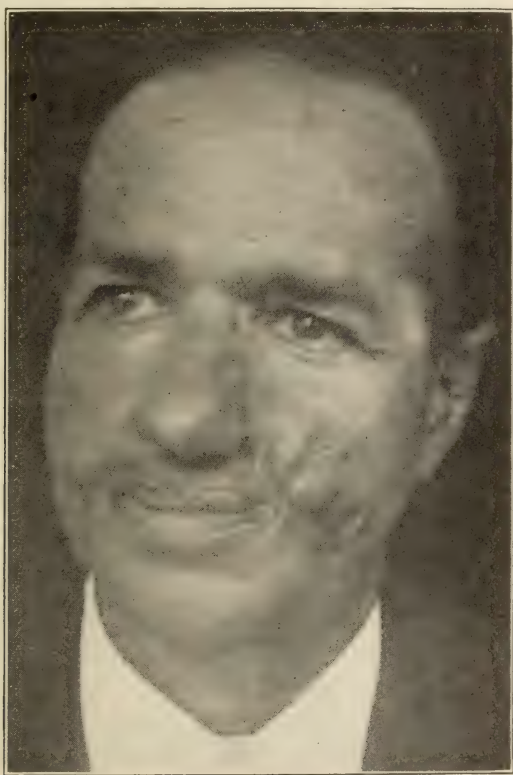
The Tricophyton infections then present themselves to us for consideration.

I first of all refer to the true "Barber's Itch," the sycosis barbae, which is an infection by the Tricophyton fungus, usually beginning quite superficially upon the face as either a simple ring worm with its clear center and circinated outline, and its fine vesicular points, spreading peripherally. This condition may remain so or may go down deep into the follicles, giving the nodular tumified form of sycosis.

This condition is easily recognizable by its hard, lumpy, tumified appearance; its duration frequently lasting a long time and being most obstinate to treatment. Simple ring worm may as well present itself upon other parts of the body, especially in children.

It is not to be forgotten that we may have upon the scalp a diffuse trycophytosis capitis, and this has very frequently been mistaken for seborrhœa, but is of a much more contagious nature, however, than seborrhœa possibly could be. The microscope here will aid us in a diagnosis, presenting large numbers of fungi, and beneath the scales are to be found reddish points or papules.

We must, as well, not forget the typical ring worm of the scalp with goose-flesh appearance, with stumps of broken-off



Same as previous case showing healed condition with marked scarring, the result of deep infection.

hair, and its defined circinated borders; in direct contrast with alopecia areatas which are smooth and lustreless and do not have the goose-flesh appearance, nor do the hairs seem to be broken off; being quite devoid of hair, but occasionally a few fine, downy hairs are to be seen. The patches of the ring worm

are characterized by dry scales which are usually greyish in color. The hair usually breaks off close to the scalp, leaving the stumps exposed, which can be easily removed by the fingers, this act itself differentiating this form of ring worm from the other forms.

It is to be remembered at this point that adults do not suffer from ring worm of the scalp, it being practically a condition which is to be seen only in the scalps of children.

That the Tricophyton infections are of a highly contagious nature there is no doubt, frequently spreading through institutions and orphanages with great rapidity, and frequently with great intensity; being very obstinate to eradicate, and even lasting for a year or two, epidemics appearing from time to time showing the active resistance of the spores.

That erysipelas is of a highly contagious nature we are more than aware; the utmost precautions have always been taken to prevent its spread, and especially when one is associated in doing surgical work.

The question as to the recognition of erysipelas, the points to be borne in mind are that erysipelas usually begins at a point, spreading itself peripherally with a well defined border. The inflammation is deeply seated, involving the subcutaneous tissues, which is quite in contrast to an acute inflammatory erythematous eczema which would come in for differential diagnosis. The sensations in erysipelas are those of fullness and burning and occasionally decided pain rather than that of itching. The character of the discharging fluid is quite different from that of acute eczema, being more serous than watery. There are, as well, constitutional disturbances and fever; not forgetting the line of demarcation, this however not always being prominently defined. There is a tendency to vesiculation in erysipelas; however, the vesicles are usually larger than those in eczema, having a tendency to become bleb-like in character.

I should like to mention at this point that a saturated solution of magnesium sulphate has always given the best of results in the treatment of this condition, as well as a preventer of the spread of the condition to adjacent parts, a hyper-saturated solution of the salt being applied with eight or ten layers of cheese cloth which is covered over with oiled paper to prevent its evaporation, because it rapidly becomes hard and recrystallizes when permitted to be in contact with the atmosphere. Ex-

perience has demonstrated that the oiled paper is to be preferred to oiled silk because of the fact that the oiled silk rapidly crumbles away under the influence of the action of the magnesium sulphate.

Scabies or the "Common Itch" is certainly of a highly contagious nature,—that is to say, contagious when one comes in direct contact with the patient for a greater or lesser extent of time; in other words, direct contact with the patient's body or sleeping in the bed clothes which have been infected by a patient having had scabies. The mere shaking hands with a patient whose hands have as well been infected with scabies has never transmitted the disease to me or those who are associated with me in my dermatologic work in the various skin clinics with which I am connected.

Scabies is at times quite easily diagnosed, and yet again there are cases which are more or less atypical and difficult. I shall consider the lesions in their order as produced upon the hand, wrist, elbow, axillae, and penis. While lesions are to be found upon the abdomen, buttocks, inner surface of thighs, legs and between the toes, in these locations they are not quite as characteristic as those to be observed in the before-mentioned regions; so that I shall limit myself to a discussion of these parts, with the hope of making the matter of recognition of this annoying dermatose somewhat clearer.

The predominant symptom of which the patient complains is the intense itching, always worse at night, due of course to the activity of the itch mite, the *acarus scabei*, which is a noctambular parasite. The chief characteristic of the eruption is the multiformity, consisting of vesicles, excoriated papules, pustules, scratch marks, and is frequently contaminated with impetigo and eczema. Upon the hands and wrists the condition is decidedly characteristic, appearing especially between the fingers, as numerous vesicles and scratch marks. Here are to be found the burrows, especially on the lateral surfaces of the fingers. A hand magnifying glass often assists in locating the burrow; Sabouraud offers the ingenious suggestion of applying ink to an infected region, especially in cleanly persons, on whom the parasite is hard to discern. The burrows are filled with ink by capillarity, the excess is wiped off, and leaves the burrows standing out quite prominently. It is to be remembered that scabies in this region attacks as well the palm of the hands. On the wrists, especially at the folds, on the flexor sur-

faces, may be seen typical lesions, vesicles, infected and non-infected, burrows running transversely, and numerous scratch marks. The bend of the elbow usually does not show burrows, but instead, first presents numerous scratch marks, followed later by secondary infection and vesiculation. Likewise at the axilla, burrows as a rule are not to be seen, scratch marks here seem to be most predominant, usually at the anterior fold, on a line with the seams of the undergarments. The penis is indeed a most favorite seat for the scabies lesions, both upon the shaft and glands of the organ, appearing as red papules and occasionally associated with vesicles and burrows. To recapitulate, the diagnostic features of scabies are the presence of the burrow with its itch mite; intense itching, worse at night; absence of lesions on face and neck; occasional presence of lesions on face of nursing infants; presence of lesions about nipple in the female; presence of lesions upon the shaft and glands of the penis; characteristic lesions to be seen between the fingers and at flexures of wrist.

If there is any one other condition which as a rule is diagnosed as scabies, especially in infants and children, it is the itching dermatose of Bateman. I refer to lichen urticatus or papular urticaria, which is usually to be seen during the earlier years of childhood. It differs from scabies, especially when upon the hands and wrists, in the fact that it begins as an urticaria, the lesions being rather small, and frequently decidedly papular in character. As a rule, when the patient is brought to the physician the disease is usually well developed, making its diagnosis from scabies all the more difficult. In this well-developed stage it presents rather pale red papules with scabbed tops, usually upon the hands and limbs, although the face and body are frequently the seats of lesions. Minute disseminated vesicles occur here and there with occasionally a pustule, infected by scratching, as the itching is intense. There is a tendency for the papules to become linear following one another closely, probably along the line of a scratch mark. As old lesions disappear they leave behind a dark spot, and frequently the older papules appear to be quite flat upon their surfaces, and if held at a proper angle with the light, they appear to be quite shiny. The duration at times is quite long, usually better in the winter time, only to recur when warm weather sets in again. The main points of differentiation from scabies are, the absence of burrows and the itch mite, absence of lesions on the penis, oc-

casional presence here and there of wheals, with an occasional antecedent history of urticaria; tendency of papules to become flat and shiny, recurs in summer time, itching usually worse in the day time, and is not rapidly responsive to treatment. Its resemblance to scabies is mostly in its appearance.

We are now ready to take up, for a few moments, a consideration of the recognition of the cutaneous manifestations of syphilis. It is more than important that we should be able to recognize the presence of lues from the cutaneous standpoint. It is indeed to be regretted that patients are going about from day to day with unrecognized syphilitic manifestations because of the inability of the physician to recognize their existence. Probably the most important fact accounting for the physician's inability to recognize is, because the physician hesitates to ask his patients the necessary leading questions which would assist him in a diagnosis of the existing condition, because of his or her great fear of offending the patient. This is indeed a crime and is unfair to the patient himself and to the community at large. If a physician hesitates in asking the patient the necessary questions, regardless of the fact of whether the patient feels insulted or not, it should not deter him from doing his duty to the public at large as well as to the patient himself.

The contagibility of syphilis we do not question for a moment, whether it be in its earliest manifestations or even in its latest, all forms now of syphilis being considered of a highly contagious nature, whether it be the mucus patch or whether it be the broken down gumma. One could write a long paper on the question of the recognition of the cutaneous manifestations of syphilis. It is not my intention to go into details on this question at this point, merely to mention a few of the general characteristics.

As to their distribution, we know that an especially diagnostic feature is the presence of the lesions upon the soles of the feet and the palms of the hand; we know the presumed ham or copper color of the lesions; we are well aware of their multiformity and of their configuration; their oddness of configuration at times; and a point which comes to my mind at this moment is the multiformity of the lesions,—that is, the presence of papules or pustules or macules at one time; being a most important diagnostic point from smallpox for the fact that smallpox goes through its various stages of development *parripassu*

with the existing conditions, that it develops from one stage to another, hand in hand; there is not that presence of various formed lesions which is the case in syphilis.

The question of spread of the various contagious dermatologic conditions is necessarily a most important one. Those conditions which are of a highly contagious nature certainly demand the prevention of spread of the disease to adjacent parts of the individual who is affected, and a prevention of spread to those who are closely associated or related to the patient in question.

Where a patient is affected with a contagious skin disease, the best method of prevention of spread is the thorough application of the unguentous substances which are used, being of such a nature as will render it entirely antagonistic to the micro-organic life which exists in the condition to be combatted; while beyond the infected areas it is as well advisable to use a mild antiseptic solution over the parts adjacent to the areas affected; mild solutions of bichloride sometimes seem to be effective; but it must always be borne in mind that occasionally a patient's skin is decidedly sensitive and tender and reacts very unkindly to bichloride solution. Solutions of lysol and carbolic acid and some antiseptic substances likewise very frequently cause cutaneous reactions, so that where the skin is so unusually sensitive and tender as to react to the substances named, the mere use of a mild alkaline solution seems to be entirely satisfactory in preventing a spread of the existing condition. Of course, it is of the utmost importance that the patient should be directed to use his or her own towel and soap during the existing condition, and should as well use their own bed clothing, which should be thoroughly scalded after the patient shall have been entirely cured.

Regarding the question of syphilitic patients who have apparent cutaneous manifestations, whether they be a mucus patch or other cutaneous manifestations, or even a chronic syphilitic ulcer, these patients should certainly be most thoroughly informed as to their existing condition; they should be told to use their own eating and drinking utensils; they should be cautioned about using public fountains for drinking purposes; they should be cautioned about going into public places to eat or to be shaved or in public baths or anywhere at all in which they would possibly come in contact with the public at large. I recall especially one case in which I had given most rigid instruc-

tions as to the directions which he was to carry out regarding his condition and the protection of the public. He had a number of acute mucus patches. After having left the dispensary at one of our institutions, I happened to follow him, and a short distance away from the institution I found the patient at a public fountain drinking of the drinks which were to be sold, after all my instructions and care in directing the patient; and one can readily see what a possible source of infection this patient could have been.

It is just as important for the public to be cautioned upon the fact of the existence of such conditions; they should be instructed not to drink from public cups which are attached to drinking fountains; those who patronize the cheaper restaurants should be cautioned about drinking from cups or glasses which have cracked edges because of the fact of the danger of disease germs lurking in these crevices which are not properly cleansed or sterilized. An innovation at the present time which is of the utmost importance to public health in the prevention of contagious skin diseases, especially where they linger about the mouth and lips, is the installment of the sanitary drinking cups which are being attached to public drinking places and which can be purchased for one cent, being contained in slot machines, which insures each person getting a drinking cup of his own, which is composed of cardboard glazed over with paraffine. It is requested that the cup be crushed immediately after using, and is thrown aside into a receptacle for the purpose.

Another method for the prevention of spread of skin diseases in public places is the use of the liquid soap, which is now practically installed in all modern public places. Many of the barber shops which are not modern in their technique are the lurking places of many skin diseases which are transmitted to many an innocent person. In the first place, a number of the barber shops are responsible for the transmission of such diseases as syphilis, barber's itch or the true ring worm, sycosis vulgaris, and common baldness, acne, furunculosis, impetigo contagiosa, epithelioma, lupus, etc. Many of these barber shops have the habit of using hot towels on a patron, which are repeated from one patron to another. In controversy with a barber on this point he advised me that he considered a hot towel was always sterile, and that if he did use it from one patron to another he could not see how he was spreading infection; yet when I remonstrated with him the fact that many of

these spores were not killed by a towel merely being immersed into hot water, he did not seem to be able to grasp the advisability of using separate and individual towels for each of his patrons; and yet this was in a first class shop. The barber, by the use of the same comb and brush, disseminates the germs which are responsible for baldness.

The advice therefore to the general public should be that those who patronize the barber shop should have their own brush and comb, which should occasionally be sterilized. There are, however, many of the more modern of the barber shops to-day which have a sterilizing apparatus of their own in which towels, combs, brushes and shaving utensils are sterilized in the presence of the patron, an attendant standing beside the barber handling the sterilized towels, etc., upon a sterilized tray. A remedy for the existing evils in barber shops should be the passage of State laws regulating the fitness of barbers to follow their trade and laws regulating the sanitary conditions of their emporiums. Such laws, according to my present knowledge, now exist in Wisconsin, Michigan, Kentucky, Missouri, Minnesota, Connecticut and Washington. In New York, New Jersey and California, if I am not misinformed, such laws have not been upheld; but in the States in which laws exist demands are made at every session of the Legislature to have them likewise repealed. Strenuous demands have been made in our own State here from time to time to enforce passage of State laws regulating barber shops, but so far they have been most dismal failures. It appeals to me that the best solution of the problem would be that the local boards of health should have the responsibility in charge of the sanitation of the barber shops, and should see to it that all barbers have a general understanding of the nature and effects of contagious skin diseases, the proper laws and rules regarding sterilization and sanitation, which certainly means that we would have a lesser amount of skin diseases traveling from one person to another, and would most certainly mean the decrease of dissemination of syphilitic virus from one person to another.

PHLYCTENULAE IN ADULTS.—In the *Klin. Monatsh. f. Augenheilk*, April, 1909, Dr. C. Cohen says: Phlyctenules, affecting in particular the female sex are found in young and middle-aged adults, almost invariably as a continuation of phlyctenular disease in childhood. Their appearance in adults should lead the physician to observe the patient carefully for an incipient tuberculosis.

DIAGNOSIS OF THE CARDIO-VASCULAR FUNCTION.

BY

G. MORRIS GOLDEN, M. D., PHILADELPHIA, PA.

(Read before the Homœopathic Medical Society of the State of Pennsylvania,
Scranton, Sept., 1909).

A MOST important factor in connection with cardiac diagnosis may be said to be: To what extent is a heart capable of performing its duty? This is a question which frequently confronts us; also one demanding considerable thought and attention before arriving at a definite answer. Such conclusions cannot be obtained in an off-hand manner, or by the usual superficial examination, as practiced.

It is indeed surprising to note, as regards this important subject, that the various text-books, encyclopedias, and systems of medicine, give little or no attention whatever to this phase of cardiac diagnosis; in fact many of them have no reference whatever to the subject, either in a practical or theoretical way.

It is an easy matter to ascertain that a heart is not functioning properly when such evidences as dyspnoea, oedema, vertigo, cyanosis present themselves. But to determine the functional power of a heart, when the signs of auscultation and percussion appear negative, the palpation of vessels, and examination of internal organs evidence no abnormal changes. it is then a difficult problem. Perchance, one may wish to determine how far a convalescence has been established, in regard to the cardiac function in the various acute conditions, or in a cardiac disease, or in such chronic diseases associated with cardiac changes, to what extent the known lesion has weakened the cardio vascular apparatus.

In the differential diagnosis of the various neuroses and organic disease, we are often in a quandary as to the functional power of the organ, and one must decide whether such symptoms are the expressions of an inefficiency, due to organic disease, or the disturbed functions of a neuroses.

Hence, the ordinary methods of examination, such as, "Do you get out of breath on going up stairs?" "Can you lie down without oppression of breathing?" are not sufficient upon which to base a judgment. Therefore, we must use other means to elicit the functional power of the heart.

There are numerous observers who have studied and devised various methods to obtain this data; in fact one observer has expressed it in the terms of a mathematical equation.

Although discrepancies may be found in the various methods employed, still the consensus of opinion by those who have investigated this subject resolves itself into the fact that while no one method is perfect, yet the application of several of these methods are of diagnostic importance and should not be neglected in the routine examination of the heart.

It is the object of this paper to present to you some simple methods, which may be carried out in any office, with the expenditure of little time, and which the writer has found to be helpful in arriving at a conclusion as to the heart's functional capacity.

1. The simple test of change of position. This is carried out as follows, counting the pulse while standing, and then while lying. Normally, there should be a slowing of from five to fifteen beats, when in the lying posture. Competent observers have noticed that this slowing of the pulse rate is either diminished, will disappear, or may be converted into the opposite in a damaged organ. The procedure has been carried out in a number of cases by the writer, of various type, including any condition where there was evidence of cardiac weakness, especially those with dilated heart and myocardial degeneration, and found the test a most satisfactory one.

2. The Herz Test. This method was suggested by Herz, a German clinician, and termed by him as the "Self Checking Test." It consists of a slow flexion and extension of the right forearm, the elbow and wrist being lightly supported by the physician. The pulse is counted before and during the procedure. During the movements which must be carried out very slowly, and consume at least a minute, the patient's attention must be concentrated upon this slow movement of the arm, which should require practically no muscular exertion. Normally, there will be no change of pulse rate; in a neuroses an increased pulse rate will be noted, while in a heart that is functionally inefficient a slowing of the pulse rate will take place as much as twenty beats. The effect of this procedure is in all probability brought about through the central nervous system, and partakes of the form of a self inhibition.

Although this test has been highly lauded by competent observers, I have not attained the general results acclaimed by

others. This may have been due to faulty technique, while in such a procedure there is a mental or psychological element to be considered which may enhance the value of the test. In the cases where the writer applied said method, the results were most marked in those cases of cardiac disease attended with general sclerotic changes. In the neuroses an increased pulse rate was obtained as above stated in the reaction to the test.

3. A test was brought to my attention by observing the fact stated, that if the breath could not be held for fifteen seconds, it was an evidence of inefficiency. This led me to investigate the following method, which for want of a better term has been called the "Breath Holding Test." It is carried out as follows: The pulse is counted for three or four quarter minutes, so that an average pulse may be computed, and any variations noted for fifteen seconds. The patient is then instructed to take a deep inspiration, holding it for fifteen seconds, during which time the pulse is counted, and attention directed to the rhythm.

This test I have carried out in some twenty-five to thirty cases, including normal cases, cardiac disease, sclerotic changes, malignant diseases, Bright's disease, in fact types of cases in which in all probability some myocardial weakness existed. The following results were noted: In normal hearts there was an increase in rapidity of the pulse for the first two or three seconds, followed by a slowing, which became more marked during the breath-holding period, while at the duration of the fifteen seconds the pulse count was either normal or had decreased two or three beats. In abnormal hearts or the diseased conditions mentioned above in which this test was used, the following was noticed: Upon holding the breath there was an increase in the rapidity of the pulse rate for the first five to eight seconds, followed by a slowing and a decrease in tension, but not to the extent as in the normal cases; at the expiration of fifteen seconds, the pulse count was accelerated from two to five beats. In one case, that of a ruptured compensation, the patient was only able to hold the breath eight seconds, with a marked increase in the rapidity of the pulse during that period. The results of this test were most marked in those cases of cardiac disease, where the right side of the heart and lesser circulation were involved. In the remainder of cases where myocardial weakness was probable the test was positive. This method appears to be worthy of a trial, it is mentioned for

what it may be worth, that you may use the simple method, and draw your logical conclusions.

These foregoing tests which have been mentioned are carried out with the expense of little time, and without the use of instruments.

4. Gräupner's Test. To perform this test a blood pressure instrument is necessary. Gräupner, in his researches upon this section of cardiac diagnosis, observed that the reaction of weakened hearts, to a certain amount of measured exercise differed considerably from the reaction in normal hearts.

It is generally accepted that the systolic blood pressure and pulse rate rise after exertion, and if this exertion be prolonged, the blood pressure and pulse rate will diminish to or below the normal for that subject.

To sum up Gräupner's results, he observed the following phenomena: After the pulse rate has risen and again fallen to the normal, as the result of a measured amount of exercise, the systolic blood pressure continues to rise, reaching its maximum some minutes later after the pulse rate has returned to normal, and followed by a gradual decline in the blood pressure to or below the normal. This cycle he termed the "Normal Erholung." In weakened hearts, if damage not too great, this "Erholung" takes place, but is delayed, and diminished in degree. In seriously weakened hearts, the "Erholung" may be absent, or the blood pressure descends from the start, and gradually returns to the normal.

In performing this test, Gräupner used a specially devised machine by which the amount of work done could be measured. For all practical purposes it may be computed in foot-pounds, as suggested by Cabot, by multiplying the height ascended by the weight of the individual, the height ascended being obtained by having the patient climb a known height of steps. After this procedure the pulse rate and blood pressure are observed every two minutes until the normal point is reached. The normal pulse and blood pressure being observed before the exercise.

Although this procedure may require from twenty to thirty minutes to perform, yet such a method and an expense of time are warranted by the fact that from observations made by the writer by this method, he is convinced that it is at present the most reliable and efficient method, and affords the best evi-

dence as to the functional power of the heart, of any other tests at our command at the present day.

The question arises, Do such tests enable us to detect cardiac weakness? This cannot probably be answered at the present time. Although there is probably no one accurate test, still it opens a field of research in such methods, and it is the duty of the physician in his routine examination of the heart to employ some such methods to determine what the functional power of the heart may be, such knowledge affording a great help as to therapy and prognosis.

In closing I feel justified in recommending to the practitioner these few simple methods for the determination of the functional power of the heart, when considered in conjunction with other evidences of cardiac inefficiency as the respiratory symptoms, the pulse, cyanosis, a most valuable evidence of cardiac inefficiency when associated with sound lungs, renal inadequacy and other evidences of venous stasis.

THE TRANSMISSION OF ACUTE POLIOMYELITIS TO MONKEYS.—By preparing emulsions in saline solution of the spinal cords of two patients who died from acute poliomyelitis anterior and inoculating the brains of trephined monkeys with these emulsions, Flexner and Lewis were successful not only in transmitting the disease, but in carrying the inoculations successfully through a series of these animals. Microscopic examination of the spinal cords of the inoculated monkeys showed lesions similar to those found in this disease in man. It is thought that these successive inoculations establish beyond doubt the infectious nature of acute poliomyelitis anterior.—*Jour. of the A. M. A.*, Nov. 13, 1909.

THE TRANSMISSION OF EPIDEMIC POLIOMYELITIS TO MONKEYS.—In a further note, Flexner and Lewis report that they have been successful in transmitting poliomyelitis, both from man to monkey and from monkey to monkey, by means of inoculation of the peritoneal cavity, by intravascular injections, and by intraneural injection. They are experimenting further in order to determine whether it is possible to infect monkeys with the disease by way of the skin, the respiratory passages, and the digestive tract.—*Jour. of the A. M. A.*, Dec. 4, 1909, p. 1913.

TREATMENT OF ACUTE ALCOHOLISM.

BY

HARRISON GREENLEAF SLOAT, M. D.

SOME few months since, my attention was called to the use of apocynum cannabinum as a drug useful in the routine treatment of acute alcoholism, by Dr. D. E. S. Coleman, of New York City, and, as I was about to begin a two months' service in the alcoholic ward of the Metropolitan Hospital I was moved to give it a fair trial.

For some unknown reason the usual well-filled ward was not in evidence this summer, so I had only between twenty and thirty patients under observation. With these few, however, I had most gratifying results and I can heartily recommend the method to any one who may be called upon to treat an alcoholic, no matter what stage of the disease he may be in.

The decoction of apocynum was used, and upon admission to my ward the patient was given one drachm of the drug well diluted. After a lapse of three hours he was given teaspoonful doses of a mixture of one drachm of the decoction in four ounces of water. The drachm doses were repeated on the morning of the second and third days in most cases. In severe types of delirium tremens it was sometimes found necessary to give the drachm dose on the fourth day, but not often.

The average length of stay in the hospital under this treatment was about one week, whereas, last year the average length of stay was between two and three weeks. Usually on the second day the nervous restlessness had disappeared and on the third day the patient was up and about the ward asking for nourishment.

All alcohol was stopped as soon as the patient was admitted nor was it found necessary to stimulate in any case either with the usual drink nor with strychnia.

Another point that impressed me was that patients left saying that the craving for drink had left them after a few doses of the medicine.

EDITORIAL

A REVIEW OF THE THERAPEUTIC ADVANCES OF THE PAST YEAR.

THE past year has not been marked by the discovery of any especially new therapeutic measures, but rather by the efforts that have been made to ascertain the scope and limitations of those previously suggested.

The use of adrenalin in the treatment of shock has been very carefully studied. The opinion of most experimenters is that it has a decided value in this condition, but to be effective it must be injected directly into the veins and in severe cases directly into the arterial system. The drug is most effective when mixed with normal salt solution and injected slowly and continuously, as its effect is transitory. It has also been suggested as a valuable agent in relieving attacks of bronchial asthma.

The administration of bismuth in large quantities in order to facilitate the taking of radiographs of the stomach and intestines, and also the extensive use of bismuth paste in the treatment of tuberculous sinuses has resulted in the development of a large number of cases of poisoning from this substance. The subnitrate of bismuth is the preparation ordinarily employed for these purposes and two types of poisoning are recognized: first, nitrite poisoning, which comes on shortly after the ingestion of the drug, and, secondly, bismuth poisoning, which is usually delayed. Nitrite poisoning is characterized by a weak pulse, coldness of the body, dyspnoea, cyanosis and collapse. Delirium develops and death sometimes occurs. The second type of poisoning, due to the bismuth itself, presents symptoms of stomatitis, marked inflammation of the buccal mucous membrane, salivation, swelling of the tonsils and of the parotid glands. Diarrhoea and vomiting are present, and in some instances ulceration of the bowels and albuminuria and casts in the urine. These toxic disturbances, which are by no means rare, show that bismuth subnitrate cannot be employed indiscriminately for the purposes above mentioned and a less dangerous substitute for it is greatly needed.

The calcium salts have been attracting the attention of physiologists during the past few years on account of the important part which they play in the blood and on account of their relation to the activities of the parathyroid glands. It has been shown that when the parathyroid glands are removed a rapid withdrawal of calcium from the tissues occurs and tetany develops. It has been found that this condition can be checked by the administration of calcium salts. The employment of the calcium salts in a great variety of conditions has been brought about by Wright's suggestion that while a diminished blood coagulability may not lead to actual hemorrhages there may occur serous hemorrhages or exudates such as edema of the hands and feet not due to circulatory or kidney lesions, chilblains, urticaria, and some forms of headache. Luff, who has employed calcium lactate in a variety of abnormal conditions above mentioned, states that 78 per cent. were cured and 9 per cent. more were considerably improved. Calcium salts have also been recommended in the treatment of epilepsy, amenorrhea, osteo-malacia and rickets. It would seem that the calcareas so long and successfully employed by homœopathic practitioners are at last beginning to be accorded the recognition their value merits by the dominant school of medicine.

Coley's toxins in the treatment of inoperable sarcoma continue to be used by a limited number of observers, and the impression seems to be that the number of recoveries that have occurred are sufficient to warrant a thorough trial of the toxins in suitable cases. It would seem that they are especially valuable as a prophylactic after operation, it being stated that the proportion of recurrences are less than 25 per cent., whereas in cases in which the toxins were not used after operation the proportion of recurrences is about 75 per cent.

The lowering of high blood pressure by means of nitrites is a procedure which has been thoroughly discussed during the past two years. It is generally conceded at the present time that great harm may result from the indiscriminate use of nitrites to reduce the blood pressure in cases of arterial sclerosis and interstitial nephritis. Mathews has made some interesting experiments with the various nitrites, and finds that the time in which the blood pressure begins to fall after their administration is as follows:

- (1) Nitroglycerin 1 minute.
- (2) Sodium and potassium nitrites 5 minutes.

(3) Erythol nitrate 5½ minutes.

(4) Mannitol nitrate 12 minutes.

The amount of fall in millimeters of mercury was as follows:

(1) Nitroglycerin 28 mm.

(2) Sodium and potassium nitrites 32 mm.

(3) Erythol nitrate 35 mm.

(4) Mannitol nitrate 35 mm.

He further found that with nitroglycerin the pressure begins to rise almost immediately after a maximum fall has been reached, and the effect of the drug has completely passed away in 30 minutes. Sodium and potassium nitrites have a more extended action, their effect being maintained for about 2 hours. In the case of erythol and mannitol nitrates the blood pressure does not reach normal until after five or six hours.

It is evident that we must administer nitroglycerin quite frequently if it is proposed to keep the blood pressure lowered for any considerable length of time. It is most suitable to cases where rapid but short-lasting effect is desired. There has been a widespread opinion among physicians that many of the hypodermic tablets of nitroglycerin on the market were inert. Experiments conducted by Edmonds and Roth show that this is not true, and that these tablets are quite efficient provided they are comparatively fresh.

The employment of fresh air in the treatment of disease seems to be gaining ground. Some pediatricists go so far as to say that all febrile diseases of childhood with the exception of measles are benefitted by an abundance of fresh air. The open air treatment of pneumonia, while having many ardent advocates, does not seem to have grown in favor with the profession in general. Jacoby has called attention to the value of fresh air in the treatment of rickets, and his opinion is supported by a number of observers. Great emphasis also is laid upon the importance of having an abundant supply of fresh air for patients convalescing from surgical operations, especially those who have been operated on for tuberculous disease of the bones or joints. The beneficial effect of fresh air in these conditions does not seem to be fully appreciated by the average surgeon, but with growing experience we believe that the use of this valuable adjunct during the convalescent stage will rapidly grow in favor. In fact, we feel confident that the model surgical ward of the future will have a large open air veranda

conveniently located on which the beds may be wheeled and the patient kept in the open air a large part of the twenty-four hours.

The use of bacterial vaccines according to the "opsonic index" method of Wright does not seem to have gained much in professional favor during the past year. While there is a widespread impression that the vaccines are of considerable value in the treatment of a limited number of infectious diseases, clinicians generally regard the opsonic index method of determining the dosage as impractical and unnecessary. Careful clinical observations of the effect of the injections appear to be the most satisfactory, as well as the most rational method of controlling the size and frequency of the dose.

Flexner's anti-meningitic serum for the treatment of cerebro-spinal meningitis has been extensively used both at home and abroad in the treatment of this disease. The reports received up to the present time indicate that the early use of the serum is distinctly advantageous in the treatment of this disease. Owing to the vast difference in the mortality rate in different epidemics it naturally requires a long period of time to determine definitely what beneficial effects may be expected from the serum. The most reliable statistics at the present time seem to indicate that the use of the serum reduces the mortality about 25 per cent., and a large number of eminent pediatricists have urged that the serum be employed in all cases of cerebro-spinal meningitis.

The psychical treatment of disease is a subject which is commanding more and more attention on the part of medical men, and considerable work has been done which enables us to utilize psycho-therapeutic measures in a scientific and rational manner. Unfortunately, many physicians as well as the laity, confuse rational psycho-therapy with Christian Science, while others seem to think that hypnotism is the chief psycho-therapeutic procedure. Both of these views are, of course, incorrect, as psycho-therapy has nothing to do with Christian Science and very little to do with hypnotism. Explanation, encouragement, re-education and work are the principal psycho-therapeutic measures that can be used by the practical physician, and each of these can be employed with advantage in a great variety of diseases both functional and organic. The sooner the great body of the medical men become proficient in their proper use the better for the medical profession and the worse for charlatans and fanatics.

THE TREATMENT OF PERITONITIS.

THE treatment of diffuse peritonitis constitutes one of the most important problems of abdominal surgery, and the great advances which have been made in the management of this disease during the past two or three years have resulted in the saving of many lives. Inasmuch as the general practitioner, as well as the surgeon, is often called upon to face this serious condition, we have thought it well to discuss a few of the more important steps in the treatment.

At the first sign of the on-set of peritonitis, anatomical and physiological rest of the inter-abdominal organs, and especially of the gastro-intestinal tract, is imperative. Naturally this is best secured by rest in bed. Peristalsis is best controlled by withholding all nourishment by mouth, either solid or liquid. The postural treatment should be begun at once. This is carried out by elevating the head of the bed. This serves to drain the infective fluids to the least dangerous portion of the abdomen, and also gives the omentum the best opportunity to seek the site of the lesion and to wall off the infection. The administration of purgatives, in the opinion of most authorities, is to be discouraged. The practice most generally recommended at the present time is to wash out the lower bowel by means of a soap and water or glycerine and water enema; and then keep the bowels as quiet as possible. It is very essential that the patient suffering from peritonitis should have water freely. On account of the effect of water in increasing peristalsis when given by mouth, and also because of the fact that paresis of the intestines often prevents the water reaching the large intestine where it is absorbed, it is necessary that we should have some other means of introducing it into the circulation. The constant administration of water by means of the rectum as advocated by Murphy has proven to be the best solution of this problem. By this means we are able to get the patient to absorb almost an unlimited quantity of normal saline solution provided it is administered very slowly and steps are taken to avoid irritation of the rectum by means of a proper tube. Some surgeons employ the drop method, controlling the flow by means of a pinch-cock on the tube. Another excellent method is the so-called "gravity" method, described by Murphy in his article in *Surgery, Gynecology and*

Obstetrics, June, 1908. This consists of placing the reservoir containing the saline solution at an elevation of from 6 to 12 inches above the rectum,—the object being to make the pressure of the fluid slightly greater than the intra-abdominal pressure. This has the advantage of allowing the patient to pass flatus out through the reservoir, and is less likely to cause distention.

The use of morphine in the treatment of diffuse peritonitis has been condemned by most authorities. Before operation it deceives both the patient and the physician, and may be the cause of delaying an operation which should be performed at once. It is also believed to diminish the leucocytes, and by increasing intestinal retention to add to the absorption of toxic material.

It is important in our enthusiasm for the newer methods of treatment which have proved successful that we should not lose sight of the fact that early operation is a most essential factor in preventing the development of and in securing the control of cases of diffuse peritonitis in their early stage. If the abdomen is opened, the toxic material removed, and the avenue of infection properly treated within 48 to 50 hours, the chances of controlling the condition by means of the methods above referred to are extremely favorable. Cases in which operation is delayed for a longer period are much more likely to prove fatal. Deaver, of Philadelphia, in an excellent article on peritonitis, sums up the essential features of the modern treatment of this disease, as follows :

1. Early operation.
2. Light anaesthesia.
3. Rapidity of operation.
4. Appropriate treatment of focus of infection.
5. Avoidance of flushing and evisceration.
6. Proper drainage.
7. Simple post-operative treatment by posture and the introduction of normal saline solution by the rectum with pre-digestive beef for purposes of nutrition.

GLEANINGS

ON THE ORIGIN OF UTERINE TUMORS.—Dr. A. Theilhaber (*Munch. med. Wochenschrift*, 1909, No. 25) compares a series of 228 myomata with one of 133 carcinomata of the cervix uteri. In women of higher social position and ease, the myomata formed 38%; cancer of the cervix, 4%; racially, of the total number of myoma cases, 19.1% were Jewish, and in the carcinoma series, this race composed 0.75%. The social position of the patient has an influence here because the richest class—1, eats more; 2, has more albuminous food; 3, exercises less; hence, combustion is slower than in women of the laboring classes. Correspondent with these facts, it is noted, that, previous to the development of myomata, there occurs increased deposition of fat, and that many of these patients have other troubles, often complicated with obesity, such as: arterio-sclerosis, myocarditis, nephritis, diabetes, etc., conditions particularly evident in those of Jewish race, in which a predisposition to obesity is extremely common. Of the cancer patients, on the contrary, previous to the development of the disease, many were invalid, thin and pallid. Because of their sociologic position, they were forced to much laborious work, and that on a spare dietary. A smaller group seems to have had over-nourishment with meat (butchers' wives, etc.). The author emphasizes the opinion that we shall learn much more in regard to the origin of neoplasms by chemical and biologic research than by histologic study of the growths already formed. Changes in the composition of the blood as well as the relation of hemic circulation to tissues and regions are indubitably concerned in the development of new growths. Myomas are found only in well nourished organs; cancers in the ill-nourished. Hence, myomata in the uterine corpus develop only when the organ is periodically or continuously hyperemic—usually only during the period of sexual activity. Before puberty or after the menopause, myomata are seldom found. Cancer, on the contrary, often develops in a poorly nourished cervix uteri, and, if the climaxis be past, it is not infrequently found in the under-nourished corpus uteri characteristic of that period. The older the woman, the greater the likelihood of an affection of the corpus. Myomata are more often found where the uterus has borne few or no children; cancer keeps pace with the birth rate. Cancer more rarely develops in the virgin cervix, but is oftener found in the corpus, whence it appears that anemia favors the development of cancer; hyperemia, that of myoma. The cicatrices, found post-partum contribute also, mechanically, to the anemic condition of parts of the organ.

COLI-BACTERIURIA.—Wiens, in the *Munch. med. Wochenschrift*, 1909, No. 19, describes six cases of general infection with the bacterium coli commune in the Breslau clinic during the last year. In all of the cases, this

bacterium was demonstrated in the blood during life by the usual bacteriologic technic. One case was a puerperal sepsis developing from suppurative endometritis, in two cases, the infection began in the liver or gall bladder; and three started in the intestinal tract. A characteristic morbid syndrome, Wiens is not able to formulate from the few cases under observation, but emphasizes some points of interest, e. g., the relatively frequent intermitting type of fever with chills, noted by Jochmann; the pulse, in regard to its relativity to temperature, being higher than in typhoid, but never attaining the figure common in most other febrile diseases.

THE VALUE OF MILK-SUGAR IN THE FEEDING OF INFANTS.—Weigert (Breslau) during the last year, fed many children with the usual mixture of water and milk, but without the addition of the usual milk-sugar. He found that the use or non-use of the last ingredient had no influence on the weight-curve. In infants where the milk-water compound produced constipation, and finally saponaceous stools (*seifenstuhle*), that the addition of milk-sugar did not influence favorably these anomalies of excretion. In infants with "dyspeptic" stools, the milk sugar retarded a return to normal conditions, and offered no compensatory advantage. The author's observations were made on polyclinic (dispensary) patients, and need, therefore, clinical confirmation. The milk-sugar used in these cases was the best made—chemically pure. The sociologic aspect of the question is also discussed, i. e., the sparing of considerable expense to those not able to bear it.

THE NON-OPERATIVE TREATMENT OF APPENDICITIS.—Prof. Thomayer, in the *Bulletin der IV Versammlung der bohm. Naturforscher u. Aerzte*, lucidly states his disbelief in the theory so zealously propagated since the '80's, that the treatment of appendicitis is, emphatically, the operative. Both before and during his clinic work, Thomayer never saw death follow his internal treatment of the condition. During the first five years, he had 119 cases of appendicitis which were treated according to his method, viz., avoidance of laxatives or cathartics, a minimum of nourishment, 3 cg. of morphine in solution *pro die*, and an ice bag where it was needed most. Of the 119 cases, 1 died—of miliary tuberculosis.

THE ACTION OF CALOMEL AND ITS VALUE IN INTERNAL THERAPY.—Ryback (*Revue de Medicine Tchèque, B. I., H. 3*) says: Clinical observation has taught that calomel is a dangerous medicament for one unable to control absolutely its action. The physician is never certain that he will not poison the patient, even if using only the ordinary therapeutic dose. And such accidents are not to be generously attributed to idiosyncrasy on the part of the defunct, for, the anatomic changes revealed by the autopsy table are explainable only by the mercurial action. The employment of calomel, says Ryback, is excusable only where it is indispensable, and so indicated, in the totality of the morbid syndrome. As a laxative, calomel has no advantages, and, other remedies may replace it perfectly. Disinfection of the intestinal tract, (e. g., in typhoid) is quite impossible in the first cases, and still more so when calomel is exhibited. Furthermore, the drug is not cholagogic. Finally, as diuretic, calomel so irritates the kid-

neys that not infrequently we get necrosis of the renal epithelia. The drug often fails completely as a therapeutic agent, and leads to a calomel intoxication. From these viewpoints also, calomel is replaceable with many other remedies.

A MORPHINE CURE WITH SCOPOLAMIN-DIONIN.—By this method the habit is done away with in a brief period of time, and without notable phenomena due to deprivation of the drug. A woman, habituated to morphine and cocaine, using $\frac{1}{2}$ gramme (15.4 gr.) of morphia and 0.1 grammes of cocaine daily, was broken of the habit in 15 days. At first, relatively large doses of scopolamin were given ($\frac{1}{4}$ mg., 0.02 g. morphine, and 0.003 g. of dionin). This mixture was injected hypodermically 2-4 times daily. When taking three such injections *pro die*, one of the patients developed a scopolamin intoxication, generally within 8-10 days. The morphine may be left out altogether, without the patient becoming aware of the fact; then the scopolamin-dionin mixture is decreased. It is important that the latter compound be prepared fresh, for, after three days the solutions are not to be depended upon.—Dr. Schlesinger, *Berl. klin. Wochenschrift*, No. 27, 1909.

LEFRA THERAPY.—The three chief remedies now employed in the treatment of leprosy are : Chaulmoogra oil; antileprol (a derivate of the above oil; and nastin, (an ethereal extract of cultures of the streptothrix leproides. The results obtained with these remedies in the lepra colony at Kuda (Estland), showed that treatment with nastin was of the greatest value; also a combination of nastin and chaulmoogra oil, the nastin being subcutaneously injected, and the oil given per os.—Dr. Kupffer, *St. Petersburg med. Wochenschrift*, 1909, No. 22.

MACULAE COERULEAE.—Maculae coeruleae are due entirely to the bite of the pediculus pubis, and are caused by a green colored matter in solution, which tints diffusely all layers of the cutis. The dye is formed of the human blood plus a secretion from the beast, in whose internal economy it also appears. This tinctorial ability is characteristic of the pediculus pubis.—Dr. Oppenheim, *Archiv f. Derm. u. Syph.*, 1909, B. 96, H. 1.

DEATHS FROM CHLOROFORM.—Dr. R. Frank attributes these deaths from syncope, when under the influence of chloroform, to nervous excitement before and during the narcosis. To avoid this he devotes time to allaying the patient's anxiety, promising to allow the patient to do his own chloroforming. Many of them do this. When the stadium of excitement begins, the anesthetist continues the narcosis. Since the physician is present and exercising his professional functions on the patient's account, and not *vice versa*, the most humane procedure serves best, and Dr. Frank's method should be more generally practiced. Unfortunately there are M. D.'s in existence, who habitually follow the "suffocation method" when anesthetizing. The ability of these to do the wrong thing at the wrong time is almost without limit. Their number should be diminished, either by education, accident, or Providence.—*Wien. klin. Wochenschrift*, 1909, No. 22.

DIFFERENTIAL DIAGNOSIS OF WANDERING KIDNEY AND MOVABLE INTRA-ABDOMINAL TUMOR.—Dr. Kudlek (*Munch. Med. Wochenschrift*, 1909, No.

26) reports an interesting case. Woman, aet. 53, sick 9 months with symptoms extremely characteristic of wandering kidney. Objectively there was a tumor in the right abdomen, kidney-shaped, smooth, freely movable, and disappearing from the palpating finger on distending the colon with gas via rectum. Blood had never been observed in the stools and in the urine. There was occasionally some turbidity. To render diagnosis certain urethro-radiography was resorted to, a catheter opaque to X-ray being inserted, by means of which the tumor was moved in two directions, medially and downwards, laterally and down. In this dislocated position the tumor was held fast by compression with the Albers-Schonberg diaphragm, whence it was seen that, despite the extreme dislocation, the upper portion of the catheter, lying between the 1-2 lumbar vertebræ, and which necessarily lay in the renal pelvis, had changed neither the shape nor its relation to the spine. Because of this, it was decided that the movable tumor was not the kidney, but must belong to some organ lying in the abdominal cavity. It was diagnosed as cecal carcinoma, proved to be correct by operation. The entire coecum was filled with a cauliflower growth, renal in form and smooth of surface.

MYOSITIS OSSIFICANS FOLLOWING LUXATIONS.—After dislocation of the larger joints, more frequently than formerly supposed inflammation of the muscles may be noted, evidencing the characteristics of myositis ossificans. In the muscles adjacent to the joint there develops osseous new formations, generally in the 1-3 week after the trauma; in the shoulder in the M. coraco-brachialis, in the elbow in the M. brachialis internus, in the hip in the posterior muscles. Two or three weeks after the dislocation, even after the joint motion is established, there suddenly develops a relapse and mobility gradually decreases. Investigation now shows in the said muscles a tense infiltration, growing harder from day to day, and a skiagraph shows a shadow daily darker. If one finally operates, osseous masses are found lying imbedded in the muscle. Operation gives good results in the elbow; poorer in shoulder and hip, doubtless due to the greater difficulty in removal. In no case has the author seen the bony neoplasm disappear without operation. The cause of the trouble is considered to be the tearing off of minute portions of the periosteum at the time of injury, and there is probably a co-action of the synovial fluid, leaking out of the articulation. When, after dislocations, the acquired mobility begins to decrease, further movement of the joint should be stopped and skiagraphs made.—Dr. Tilman, *Munchener med. Wochenschrift*, 1909, No. 26.

THE BATHING OF THE NEW-BORN.—In one of the maternity hospitals of Moscow, one division of the infants (81) was bathed daily; another division (102) not at all, both divisions otherwise receiving the same care. In the carefully conducted experiment, the following points were noted: With the bathed infants, the cord fell off somewhat sooner; the increase or decrease in weight had nothing to do with the use or non-use of the bath, but was due entirely to other causes, e. g., the condition of the maternal health and milk supply. Navel suppuration was dependent upon non-observance of aseptic principles in caring for the cord. Febrile disturbances in the new-born are relative to intestinal disturbances, navel

suppurations, etc., but not with balneologic procedures. The temperature of the infants bathed was reduced during the bath $0.6-0.1^{\circ}$, and on being clothed $0.2-0.6^{\circ}$. As regards the condition of the skin also, there was no action or result attributable to bathing or not. Hence, whether the babe should have a daily bath or not, is entirely dependent upon its general condition and environmental condition, and plays no essential role in the development of the child.—Drs. Saizew and Schweizer, *Medizinskoje Obssenenije*, 1909, No. 1, Moscow.

COLLAGOL TREATMENT OF SEPTIC CONDITION POST PARTUM VEL ABORTUM.—In the Red Cross Hospital in Odessa, in all serious septic conditions where rapid action is desired, collargol is used intravenously. Per rectum the remedy is employed in all lighter forms of sepsis, in local affections and in general conditions at the very beginning of the invasion, and thus used, the results in many cases have been very gratifying. The author won the impression that early use of the remedy greatly lessened the gravity and course of the affection, and also from collargol inunction, sudden improvement was frequently noted. The remedy causes a lowering of temperature, slowing of the pulse, and improvement in the general as well as subjective condition, sometimes shortly after the injection there develops a chill and increase of temperature—reactions of the organism—followed by fall of the temperature with breaking out of sweat. Collargol is no specific in septic infection, but has been found extremely useful in the condition.—Dr. G. Thomson, *Therap. Obosrenije*, 1909, B. 2, No. 2.

FRACTURE-DISLOCATION OF THE SPINE.—In MacLean's case operation revealed a fissure fracture of the eighth, and crushing of the ninth dorsal arches, in addition to fracture of the seventh, and crushing of the eighth and ninth, dorsal spinous processes. The cord was bruised and compressed by the arch of the ninth vertebra which had been dislocated forward. Partial dislocation of the right articular processes between the ninth and tenth vertebrae occurred two months after the operation. This was reduced during a second operation. Three months from the time of injury decided improvement had taken place in the motor functions of the cord, but sensation had not yet begun to return. It is believed that the results obtained in this case would have been much less favorable had reduction been attempted by manipulation alone, or had the patient received expectant treatment.—*N. Y. Med. Jour.*, Dec. 4, 1909, p. 1114.

CHARLES D. FOX, M. D

BACTERIOLOGY OF MEASLES.—According to A. Lorey (*Zeitschrift f. Hyg.*, B. 63, H. 1), the streptococcus erysipclatis is the most frequent cause of rubcclar complications. The severity of a measles epidemic is dependent upon the frequency of secondary infection with the cocci, and the finding of many of these in the pharynx adds gravity to the prognosis; if culturablc from the blood, the issue is almost invariably fatal. The mucosa of the upper respiratory tract is the point of infection for these secondary factors in the disease. Pseudo-croup appears to be a pneumococcc development.

VASECTOMY AS A MEANS OF PREVENTING PROCREATION IN DEFECTIVES.—In order to prevent procreation in the criminal and in the defective classes Sharp highly recommends vasectomy. After having performed this operation upon 456 individuals he states that he has never seen any resulting unfavorable symptoms. The vas is ligated and then severed on the testicular side of the ligature so that subsequently the testicular secretion is poured out around the pampiniform plexus and absorbed. Thus the beneficial tonic effect of absorption of the secretion is not sacrificed. When sterilization is produced in this manner the subject, instead of developing an unpleasant psychosis such as occurs after castration, becomes more cheerful and otherwise mentally improved. The writer has noticed that mental and physical fatiguability is decreased and that the subject becomes more energetic. Sexual desire and ability are not impaired, and the amount of fluid ejaculated is but slightly diminished. He has noticed, also, that confirmed masturbators cease masturbating after this operation, solely because they have gained the power to restrain themselves. One of the strongest arguments in favor of the operation is the fact that those upon whom it has been performed afterwards are grateful, and that they advise others to submit to the same treatment.—*Jour. of the A. M. A.*, Dec. 4, 1909, p. 1897.

CHARLES D. FOX, M. D.

CEREBROSPINAL SYPHILIS CAUSING INTERNAL HYDROCEPHALUS AND SYMPTOMS OF CEREBELLAR TUMOR.—Syphilitic gummatous meningitis frequently causes symptoms of brain tumor, but it is unusual for these symptoms to be the result of hydrocephalus secondary to occlusion, by the syphilitic process, of the foramen of Magendie. In the author's case the foramen of Magendie was completely occluded by the syphilitic cerebrospinal meningitic process, and the ventricles, consequently, were much dilated. The distention of the fourth ventricle had resulted in compression of the white matter of both cerebellar hemispheres and compression and displacement of the dentate nuclei. The patient had been ill for several years and had complained of headache, ataxia, urinary difficulty, impaired hearing, mental dullness, and attacks of nausea, vomiting, vertigo and syncope. Examination had showed anisocoria, increased reflexes, bilateral ankle clonus and uncertain gait with tendency to fall backwards. Before death occurred there developed spasticity on the left side, sphincteric incompetence, extreme inco-ordination, and progressive stuporousness.—*S. D. Ingham, Jour. of the A. M. A.*, Oct. 16, 1909.

CHARLES D. FOX, M. D.

EXTRAOCULAR SYPHILIS.—Chancre of the lid is readily confused with suppurating chalazion and even with an acute purulent dacryocystitis.

Gumma of the eyelid is another rare disease. Lues of the conjunctiva includes mucous patches, gumma, chancre and other syphilides. Although the older ophthalmologists believe the sclera to be immune from attack of syphilis, we know this contention to be confounded, although sclerotic alterations due to lues are rare and prove to be regarded non-specific or as tubercular.

Tarsitis syphilitica is rather uncommon, although the diagnosis, by modern means, is easily possible.

The lacrimal apparatus often suffers, especially in conjunction with nasal duct obstruction, the result of periosteal and bony disease, the luetic origin of which is always to be suspected.

By far the most common luetic disease of the external eye, mostly due to congenital infection, is interstitial or parenchymatous keratitis. Probably 75 per cent. of the cases are due to hereditary syphilis. Dr. Wood entered fully into a consideration of its treatment and believes that hygienic measures—outdoor life, tonics, etc., are of more importance in the general conduct of the case than specific remedies.—Dr. Casey Wood, *Annals of Ophthalmol.*

WILLIAM SPENCER, M. D.

INTRAOCULAR SYPHILIS.—Syphilis is the cause of from one per cent. to three per cent. of all eye diseases. By far the largest number of all syphilitic lesions of the eyeball are of the intraocular structures. The iris and ciliary body are more frequently affected by syphilis than any other part of the eye. Syphilitic iritis usually manifests itself as a plastic inflammation. It affects one eye in the majority of cases, but one-fourth of them are bilateral. The appearance of the disease in the second eye may be considerably delayed, sometimes for a year. With the exception of the papular or condylomatous form, separately considered, there are no marked distinguishing features that speak for the specific etiology of the disease and one must rely upon the history and other manifestations of syphilis to determine the exact nature of the process. Iritis, condylomatous or papulosa, is supposed to be characteristic of syphilis. One, some times two or more, grayish yellow or reddish brown nodules appear on the pupillary margin of the iris, and at this site there is usually a posterior synechia. About 8 per cent. of cases of syphilitic iritis present this feature. There has been considerable discussion as to the nature of these nodules, some regarding them as condylomata and others as true gummata. When appearing in the secondary stage, as they usually do, it is probably nearer the truth to call them condylomata. True gumma of the iris may form in the later stage of the disease. It frequently affects the root of the iris, but more frequently pushes forward from the ciliary body. The disease usually appears at the time of the syphilis, about six months after the initial lesion, but it may appear before or be delayed for a year or more. The course is much like that of an ordinary case of iritis, but on the whole the prognosis is rather more grave. Especially true is this of the condylomatous and gummatous forms, for many of these eyes are lost because of the severity of the inflammation. Except when the papular form is present, which is rather characteristic, one cannot be sure of the syphilitic nature of a given case of iritis. The distinct history of hard chancre and the presence of syphilids and other luetic manifestations make the diagnosis reasonably certain.

However, in the majority of cases the clinical evidences are not sufficient to enable us to distinguish the syphilitic from other forms of iritis, and this is even more true of cyclitis, choroiditis, retinitis and optic neuritis.

The spirochaete pallida has been found in the aqueous humor by some observers, and this test might be made use of for differentiation. The recent reports on the value of serum diagnosis developed by Wasserman and

Plant on the principle of complement fixation, hold out the hope that a method has been discovered that will be of great value to the ophthalmologist in determining the exact nature of certain obscure lesions of the eye.

Choroiditis frequently occurs as a complication of irido-cyclitis. There is no clinical appearance that is distinctly characteristic of syphilis in any of the lesions of choroid or retina with possibly the exception of diffuse chorio retinitis. Acute irido-choroiditis manifests itself by an increase of the evidences of inflammation in a case of iritis. The vision is reduced and the tension lowered. Numerous opacities in the vitreous make it impossible to see the fundus. The prognosis is grave, for the retina may become detached and the eyeball may shrink.—Dr. William H. Wilder, *Annals of Ophthalmol.*

WILLIAM SPENCER, M. D.

OBSTRUCTION OF THE CENTRAL ARTERY OF THE RETINA.—A woman, 72 years old, became suddenly blind in one eye without previous cause. One hour after the event the flame of a candle could not be recognized with the affected eye, the pupil of which was semidilated and motionless to light. On the optic disc the retinal arteries were contracted, empty of blood and devoid of the light-streak. They partially recovered their calibre at a distance of one-third of a disc diameter from the papilla; a remark that applied also to the retinal veins. The papillæ was of a greyish color. In the superior temporal vein there were fragments of pale blood, alternating with dark cylinders, moving very slowly. No muscular or peri-papillary edema. At some distance from the disc a plaque, made up of particles having an adamantine resplendency, could be seen in the walls of a retinal artery. General examination of the patient yielded negative results. In particular, no evidence of arteriosclerosis was obtained from examination of the radial and temporal arteries.

The affected eye was massaged, and the sight slowly returned, until fingers were seen, but not counted, and the face of a watch was perceived as a round, white object. Ophthalmoscopic examination then showed that the retinal arteries and veins had regained more or less of their normal calibre on the optic disc; indeed, no difference could be made out between them and the vessels of the other eye. A dark red clot, of which the length was about twice the width of the vessels, could be seen to occupy part of the trunk of the superior nasal artery on the disc. No retinal hemorrhages. On the following day sight had improved to the counting of fingers, with a plus 6 D., the hands of a watch could be recognized, not without difficulty, and the visual field was of normal size. On the third day V. (with correction) = 1. The patient, however, did not read ordinary print quite so readily with the affected eye as with the other.—Dr. Van Duyse, *The Homeopath. Eye, Ear and Th. Journal.*

WILLIAM SPENCER, M. D.

ADENOMYOMA OF THE UTERUS EXTENDING TO THE RECTUM.—Sitzenfrey has found that this is not a frequent occurrence. Usually when these growths of the uterus show an involvement of the rectum there is no real adenomyoma, but an adenomyositis. Only the gland tubes, which may have a varied origin, may after the rectum has become adherent pass to the rectal musculature and produce the same hyperplasia there as in the

uterus. Of course it is possible that a true adenomyoma may develop, but the myomatous portion is then formed from the intestinal muscle. In respect to operation we must distinguish between infiltration of the bowel wall and a tumor formation. In the former there is generally an adenomyositisrecti, therefore an inflammatory condition produced by the penetration of the gland tubules. Experience has shown that in such cases after extirpation of the primary focus in the uterus, the gland tissues left in the rectum usually retrogress and the infiltration vanishes. If there is a tumor formation of the rectum, and if as is possible an adenomyoma exists, a resection of the rectum may be required, even when there is no stenosis or weakening of the patient from frequent hemorrhage. It may not be possible even during operation to distinguish between adenomyoma and carcinoma of the rectum, especially since both affections may present the same microscopic appearances. Hence resection will be called for.—*Zeitschr. f. G. u. G.* Vol. 64, 538.

THEODORE J. GRAMM, M. D.

THE RETENTION OF MEMBRANEOUS AND PLACENTAL FRAGMENTS IN RELATION TO PUERPERAL FEVER.—Puppel, of Winter's clinic, has found from a study of the literature, of clinical material, and a post-mortem findings that there are recorded at least 33 cases of afebrile retention. This relatively large number shown that retention of placental fragments does not of itself cause fever, and if fever arise it may only be a resorption fever. Post-mortem examinations have also shown that in fatal puerperal fever placental retention is rare, and when existing was not the cause of the fatal termination. Serious general infection does not usually start from retained membranes. It has also been shown that removal of placental fragments may become a serious operation since of thirteen afebrile puerpera, eight became febrile, four of whom were seriously ill. Cleaning out of the uterus becomes still more dangerous when infection has already passed beyond the uterus. The author would regard as more advisable to delay treatment in cases having an exudate at the side of the uterus, in circumscribed peritonitis of thrombosis, than to make a manual cleaning out. The author draws some conclusions from his studies, which are not repeated here, because they are stated in such a debatable form; one of them, however, is important and coincides with the experience of most operators, namely that cleaning out of the uterus is a dangerous procedure and should therefore be restricted to cases having hemorrhage and fever; especially in febrile cases the cleaning out of the uterus, if necessary, must be done with the greatest caution in order to prevent a spreading of the infection.—*Zeitschr. f. G. u. G.* Vol. 64, 475.

THEODORE J. GRAMM, M. D.

THE PROGNOSTIC SIGNIFICANCE OF BACTERIOLOGICAL EXAMINATIONS IN ABDOMINAL EXTIRPATION OF THE UTERUS FROM CANCER.—Barth's results from a study of this subject are that about one-half of all cases of uterine cancer are infected with hemolytic streptococci whose virulence is demonstrable. The occurrence of these streptococci in the parametrium is rare. If the bacterial cultures taken at the time of the operation show hemolytic streptococci in the peritoneum after closure of the wounds in the floor of the pelvis, the prognosis is unfavorable, and it is to be regarded as very unfavorable if the micro-organisms show virulence. Diplococci and bacilli,

as also streptococcus viridans, are to be regarded as comparatively harmless saprophytes as long as the patient's general condition may be presumed to possess a certain amount of resistance. It cannot be denied, however, that the streptococcus viridans may cause peritonitis requiring surgical intervention. The conclusions from these results are that every uterine cancer should be examined bacteriologically before the operation and in all abdominal extirpations the most thorough prophylaxis should be carried out in order to diminish the possibility of infection; and also that technical methods must be further tested which are likely to aid the infected peritoneum in its contest with hemolytic streptococci.—*Arch. f. Gyn.* Vol. 87, 350.

THEODORE J. GRAMM, M. D.

METASTASES IN THE SKIN IN UTERINE CANCER.—Offergeld. In uterine cancer metastases in the skin and mammae are not frequent; they occur mostly in advanced cases. The important points for localization are the region of the umbilicus and the mamma. They do not arise from inoculation, of which there is so far no proven case. They arise through the blood and lymph channels. No symptoms are occasioned as a rule. The distal portions of the urogenital organs are the points where metastases occur, from retrograde transportation. They are mostly associated with cancer of the body, but also when the disease affects the cervix, and may appear early. The operability of the case is not affected.—*Monatsschr. f. G. u. G.* Vol. 29, 890.

THEODORE J. GRAMM, M. D.

FEVER IN MYOMATOSIS UTERI.—The results of v. Franke's studies of this subject are that aside from extragenital causes and manifest necrosis and suppuration after penetration into the uterine cavity, fever in myomatosis uteri may occur as an aseptic fever in simple general necrosis; may be induced by bacterial infection of the myoma through the blood current; from thrombo-phlebitic processes; from attending salpingitis. In all of these conditions the fever may be the only indication of complications and hence before all major myoma operations it is desirable to make clinical observations for a number of days. Total necrosis of myomata is more frequent than formerly assumed during pregnancy, and since it provides especially favorable conditions for the development of micro-organisms, operation should be considered in febrile puerperium with myomatous uterus before serious septic appearances have arisen.—*Zeitschr. f. G. u. G.* Vol. 64, 449.

THEODORE J. GRAMM, M. D.

METASTASES IN THE PLEURA AND LUNGS FROM CARCINOMA OF THE UTERUS.—Offergeld has found that metastases in the pleura from primary uterine cancer is rare. They are found only in advanced cases, and mostly from carcinoma of the cervix. They arise only through the lymph tracts and from retrograde transportation from the pulmonary and peribronchial glands. They have certain points of predilection, but cause no clinical symptoms. Pulmonary metastases are relatively frequent, 5 to 7%. They occur rather early and arise also from cancer of the uterine body. They are found bilaterally and centrally situated, as also in the periphery of the lung. They originate through the blood, and occasionally by way of the lymph channels. Carcinomatous lymphangitis is rare in uterine cancer.—*Arch. f. Gyn.* Vol. 87, 286.

THEODORE J. GRAMM, M. D.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY A. LEIGHT MONROE,
Miami, Florida.

ECHINACEA AN INTERNAL ANTISEPTIC.—The following is taken from a communication by Dr. A. D. Hard, Marshall, Minn., published in the June *Medical Summary*:

"Echinacea has been one of the most valuable internal remedies that I have ever used in practice. I have very carefully studied its action on the component parts of the human body, and am satisfied that it counteracts the effects of toxins which have entered the circulation. It may do so by stimulating the natural antitoxins or it may be antitoxic in itself. In cases of infectious wounds where there is systemic disturbance due to infectious material being taken into the circulation, where the heat center is over irritated, the heart action fast and weak, the excretory organs all burdened, the mind itself showing evidences of toxic effects, Echinacea will very promptly show its beneficial effects on the entire system if taken freely internally, and the infected wound and surrounding tissues kept soaked with a 50 per cent. solution of the tincture. I have saved human lives with Echinacea and I am a willing champion of its virtues. It comes as near being an internal antiseptic acting in the blood itself as one can ask for in such cases as I have mentioned. The physician who does not know Echinacea is unacquainted with one of the doctor's best friends."

THYROIDIN FOR NOCTURNAL ENURESIS.—The *Lancet in* May contained a record by Dr. Williams of a most instructive series of cases of nocturnal enuresis. In one very troublesome case of this complaint the doctor was led to give Thyroid extract with great, indeed complete success. Encouraged by this result, he tried the remedy upon other cases and achieved more successes, although failing signally in one instance. Noticing that concomitantly with the cessation of the trouble the general health frequently improved, he gave Thyroid extract to a patient who had never suffered from nocturnal enuresis, but was otherwise in poor health. To his astonishment, the drug which had formerly cured enuresis now caused it in a most marked and aggravated form. From this excellent demonstration of the law of similars Dr. Williams deduces very sound conclusions with regard to the necessity of beginning with a small dosage, and maintains his opinion that had he given a less quantity the one failure of his series might well have been another success. We congratulate him on his cases and his conclusions. The particular symptom of enuresis is not in our pathogenesis of Thyroidin, but may now be added, and Dr. Williams has sufficiently demonstrated its homœopathicity to that condition. A let-

ter was addressed to the *Lancet* mentioning that this ability of a drug to cure a condition it could also cause, is a more generally possessed property than is recognized, but although the word homeopathy was not mentioned, the letter was not inserted.—*Homeopathic World*, Aug, 1909.

A THUJA CASE.—Dr. Noack, of Lyons, reports in a French contemporary an excellent cure of laryngeal papilloma. The patient was a lady of 33. Her illness had lasted six months, and the main symptoms was progressive aphonia. A specialist diagnosed papillomata of the larynx, and the patient underwent five local operations for their removal in the course of two months without benefit. She then consulted Dr. Noack, who found the cords red and thickened and almost entirely covered with little papillomata, especially in the arytenoid region. The right apex presented some suspicious physical signs. *Spongia* 1, three times a day, produced an improvement in the general condition and in the local congestion, but none in the papillomata and the aphonia. *Thuja* 1, three times a day, was now given. Next month there was sensible improvement, and at the end of three months in all of treatment by *Thuja*, the papillomata had entirely disappeared and the voice had completely returned.—*Homeopathic World*, Aug., 1909.

SYMPOSIUM ON AMBRA GRISEA.—*Ambra Grisea*, *amberggris*, is derived from the sperm whale, and is probably a morbid product of that animal. It must not be confounded with amber, known to our *materia medica* as *Succinum*. The great action of *Ambra* is on the nervous system. Reflex action in general is increased, with heightened sensibility. It produces faintness (like *Moschus*), nervousness, jerks and twitches. The mental state is one of nervous embarrassment and bashfulness. The cough, for instance, is made worse by the presence of other people. It is suitable for nervous, excitable children. After the nervous system its power is exerted largely on the pelvic organs; much itching and burning of the pudenda in male and female. Burning and itching in vulva and urethra during urination. Even nymphomania may be present; the congestion of the pelvic organs manifests in hæmorrhage between the periods on any slight exertion. There are many abdominal symptoms; great distension, and especially eructations of flatulence after coughing. In general, the *Ambra* patients feel tired; they sweat easily, warmth aggravates their trouble, and cold relieves. Thin, nervous persons are the typical subjects for the drug.

In amplification of the above statements Dr. Kent may be quoted. His lecture is abridged, but otherwise quoted mainly in his own words:

We see symptoms coming on at 50 that you would expect at 80. Trembling, feeble-mindedness, a dreamy state of mind, hasty going from one thing to another. Excitability followed by depression. A state of insensibility to all things, joy, grief, &c. The vertigo of old men; dizziness on getting up, on going out into the street. Dwells on grievances in a way somewhat analogous to *Nat. mur.*, but *Nat. mur.* takes pleasure in the process. Running through all the remedy is the fact that the patient cannot do anything in the presence of others. Easily embarrassed in company, constant fear that he is going out of his mind. Many complaints come on in the morning.

Music aggravates the mental symptoms. Complaints are often one-sided. Numbness runs all through the body, diminished sensibility like that of *Secale*. Itching all over the body, intolerable, keeps him awake. Tendency to bleeding from nose, kidneys, uterus. Dryness of the mouth without thirst. Inveterate constipation in old people. Distension of abdomen, great flatulence. The cough is nervous, with trembling. Palpitation from slight exertion, mental or physical or from music. The patient is generally emaciated, withered, wrinkled and tremulous. *Ambra grisea* has the most erratic symptoms found outside of *Ignatia* and *Nat. mur.* It is antidoted by *Camph.*, *Coff.*, *Nux v.*, *Puls.*, *Staph.*, and is itself an antidote to *Staph.*—Prepared from data furnished by Dr. J. H. Clark and published in June *Homeopathic World*.

SOME "SWEAT" MODALITIES.—In the report of some clinical cases made by Dr. Royal in the *Iowa Homeopathic Journal*, considerable stress is laid upon the "cold sweat on forehead," characteristic of *Veratrum Album*.

In my experience as a clinical guide, "the tendency to sweat" is equally characteristic of *Veratrum*. The sweat may be local or general, cold or hot, but as prostration is usually present, it is generally cold or at least clammy.

These "sweat modalities" are very valuable guides to me in prescribing. Dr. Allen used to regard the tendency to sweat as a most valuable indication for *Sepia* in chronic cases. Indeed this was consistent with the picture of relaxation so all pervading in the symptomatology of the drug.

The chilliness found under *Nux Vomica*, and *Mercurius* upon all movement of the bed clothes is due to the fact that the skin under these drugs is always moist. The modalities of the sweat is one of the chief factors in the selection of the remedy in malarial chills.

The night sweats often serve to distinguish *China* and *Phosphoric Acid*. The hot steam issuing from the body in fevers often serves to distinguish *Belladonna* from *Gelsemium*, *Ferrum Phos.* and other fever analogues and if we remember correctly it was the fact that *Aconite* has "covered quarts of sweat," and *Thuja* "uncovered quarts of sweat," which guided *Hahnemann* to the proper remedy in his own case after his colleagues had puzzled in vain.

A PATHOLOGIST'S VIEW OF HOMŒOPATHY.—Dr. W. H. Watters, Professor of Pathology at Boston University School of Medicine, has issued the paper he read before the Detroit meeting of the American Institute of Homœopathy in reprint form. By reason of his antecedents and of exclusive attention to laboratory work, Dr. Watters paid little attention to homœopathic therapeutics, but the modern trend of bacteriological research, the use of toxins and antitoxin, etc., have driven him to see that *Hahnemann's dictum—similia similibus curentur*—has a scientific basis and is being confirmed by the laboratory worker of the day. The production of immunity, the goal of the vaccine therapist, is probably the end of the homœopathic remedy. At any rate, homœopathic remedies are found to raise the opsonic index.

The establishment of the scientific reasonableness of homœopathy and the interpretation of homœopathic therapeutics in terms of modern medi-

cal science is an interesting work, and we have by no means heard the last of it.—*North American Journal of Homoeopathy.*

INTERCURRENT REMEDIES IN CHRONIC DISEASES.—*Nux vomica* (30) if the nervous system is too much affected and irritated; hyperesthesia of the organs of special sense; fearfulness, anxiety, inclination to lie down, aversion to the open air, violent, stubborn, obstinate; also if the menses appear too early or continue too long.

Opium (30). Lack of sensitiveness of the nervous system, deficient reaction of the life forces. (*Carbo veg.*, *laurocer.*, *mosch.*, *nitr. ac.*, or *sulph.* (all in 30th) may also be useful here).

Pulsatilla (30) in some cases, with proper intervals, alternately with *nux vomica* to remove too great an irritability.

In rare cases, if there exists too great an irritability of the nervous system, *chamon.*, *china.* *ignat.*, *teucrium*, or *valeriana* may have to be used in the same manner, if these remedies correspond better to the general condition.—Dr. F. H. Lutze in *Hom. Physician.*

CALCAREA PATIENTS.—Among the "tissue remedies," perhaps no two are more frequently indicated in the development of children than *calcarea ostrearum* or calcium carbonate and *calcarea phosphorica* or calcium phosphate. The temperament of the former is sanguine vital lymphatic—the blonde with a tendency to obesity; of the latter it is bilious motive—dark anemic and thin instead of fat. In the constitutions of each of these types, the lime salts are lacking principally and this becomes more and more recognized as they progress. At birth, the lymphatic constitution permits the child to readily adapt itself to the parturient canal. Its appearance for a time is considered quite normal and its good-natured disposition lends support to this opinion. In the constitution of each of these types, there is retention of acids, hence there is a sour odor to the whole body and its discharges. The disturbances of the gastro-intestinal tract prevent proper nutrition of the tissues. The lack of lime salts in the bones results in a weak, bony framework, and its attendant curvatures. But the constitutional conditions of these children are too well known to require repetition here. Unless the condition is corrected early in life by the administration of the indicated remedies and proper attention to hygiene, they are hampered all through life, and the offspring of such parents will show the same tendency.—*North American Journal of Homoeopathy*, Nov., 1909.

COLCHICUM seems to paralyze and render powerless the parts affected, and when we find with this condition edematous swelling occurring in a leuco-phlegmatic constitution, we may expect a cure by the administration of this drug.—B. Simmons, M. D., Sydney, N. S. W., *Homoeopathic Physician*, 1889.

NITRIC ACID IN INJURIES TO THE SPINE.—A severe injury resulting in mischief to the spine is often followed by most troublesome and varied disturbances of the system, and each case must, of course, be treated in strict accordance with the symptoms present. *Arnica*, *rhus.*, *calc.*, *hypericum* and other medicines are frequently required, but I wish to call attention to nitric acid which has in my experience been frequently indicated,

and it has helped some cases more than any other agent. After a severe shock to the spine, a profuse perspiration on the hands and feet often breaks out. When this symptom is present nitric acid should be studied, as it will probably prove to be the simillimum.—B. Simmons, M. D., Sydney, N. S. W., *Homoeopathic Physician*, 1889.

IRIS VERSICOLOR.—A. McNeil, M. D., (*Homoeopathic Physician*). This drug has been lauded as a specific for sick headache. Beware of this and all such delusions. There is no specific for diseases, but every drug is a specific for a certain group of symptoms, and I will endeavor to show those that are curable by iris.

It is indicated in sick headache which begins with a blur before the eyes. Kali bichrom. cures blindness followed by violent headache; the vision returns as the headache increases. Gelsemium also has headache preceded by blindness. It cures another form of headache, in which there is dull throbbing or shooting in the right side of forehead, attended by nausea, is worse toward evening, from rest, cold air, and coughing, and is ameliorated by moderate motion. Ferrum aceticum is somewhat like it, being aggravated by moderate motion and relieved by continued hard exercise in its headaches and other forms and complaints, as, for instance, asthma relieved by dancing is cured by it. Iris has a headache of sharp, cutting pains of short duration, and changing location often.

Iris is to be thought of when the mouth and tongue feel as though they had been scalded; apis and sepia also; while with sanguinaria the tongue alone feels as if scalded. Iris, with many other remedies, has salivation, but it has a symptom accompanying which differentiates it from that of all other drugs—viz.: the gums and tongue feel as if covered with a greasy substance. This peculiar feeling should be borne in mind in gastric conditions, including sick headaches.

Iris is indicated in any of the diseases of the throat, including diphtheria, when it burns and smarts, with a feeling of enlargement, as if it were a burning cavern.

We should remember this remedy when milk disagrees, it becomes sour and is thrown up. In aethusa, the milk comes up in clots, and the vomiting of milk which is characteristic of mercurius is, like that of iris, sour.

Iris has a large field of usefulness in gastric derangements. It is useful in nausea and vomiting of sour food (calc. carb. and chamom.), the whole person smells sour. Hyperic., magnesia carb., rheum and sulphuric acid all have the sour smell of the person. It is indicated in vomiting of thin, watery fluid of an exceedingly sour taste.

Iris is curative in diarrhea of watery stools, the anus feels on fire; this burning may be either at the anus, or it may extend through the whole alimentary canal, from the mouth. Arsenicum is also characterized by this burning at the anus, but the other symptoms of these drugs are too different to embarrass you in your selection.

CONSTIPATION WITH INFANTS.—The worst cases of constipation are found in infants and sucklings. Many children suffer unspeakably from this cause, especially as the ordinary treatment with laxatives only aggravates the situation. A considerable improvement may often be attained by dietetic measures, but an actual cure is usually only attained by the use

of the specifically acting remedy, selected according to the laws of similars, and this will then not only act upon the intestines, but also on other morbid symptoms of the body. Children who suffer from glands in the abdomen tend to the most obstinate constipations. These cases are usually cured by Plumbum, and especially by Plumbum acet.

With a delicate child suffering from an obstinate constipation and prolapsus of the rectum, Silicea gave immediate relief.

Another case, that of a little girl, two and a half years of age, who first suffered from blood evacuations, and afterwards with constipation attended with a white coating of the tongue and lack of appetite, *Lycopodium* brought great relief.—*Translated from Hom. Monatsblaetter*, May, 1909.

BADIAGA (FRESH-WATER SPONGE) IN PLEURISY—*Badiaga* is indicated in pleurisy when the pleuritic pain is either in the right or left side, the stitches being aggravated by the least motion or on full respiration, accompanied with soreness of the whole body, more especially in the chest. When there is a cough present, it generally is of a spasmodic character, the mucus from the bronchial tubes being of a viscid character, accompanied with a tickling in the larynx, or the cough may be accompanied with a yellowish mucous expectoration, relieved in a warm room.—*Homeopathic World*, Sept., 1909.

ERYTHROXYLON COCA AND STRAMONIUM.—These two drugs are antagonistic on two points. The *Coca* patient is fond of solitude, while the *Stramonium* patient prefers company. The *Coca* patient likes darkness, and the *Stramonium* patient light. *Coca* is homœopathic to the hawking up of small transparent pieces of mucus (principally in the morning).—*Ibid.*

MERCURIUS CYAN. IN URINARY COMPLAINTS.—It is useful in suppression of urine, even in cases in which the urine has been retained for four or five days. Also in cases where the urine is of an amber color, and urination is painful; or where the urine is either scanty and clear, or scanty and dark. The urine contained in the bladder is generally very albuminous. There is usually great debility present and a marked sensation of chilliness. *Mercurius cyan.* has proved a valuable remedy in nephritis, where the above-mentioned symptoms are present. As before stated, the urine is very albuminous, and many cylinders, either broken down or in a whole state, with fine detritus, are found in the urine. The tongue of the patient is paler than usual, and has at the base a streak of a yellowish color. It sometimes becomes swollen, when it is red on its edges. It must be borne in mind that this drug is of an extremely poisonous nature, and, therefore, it is not advisable to prescribe it lower than the 6th dilution. It has amongst its analogues *Acidum muriaticum*, *phytolacca decandra*, *Mercurius iodatum*, *Lachesis*, *Hepar sulphuris*, *Kali bichromicum*, and *Kali causticum*.—*Ibid.*

LILIUM TIGRINUM AS A HEART REMEDY.—A prominent heart symptom calling for *Lilium tigrinum* is a sensation as if the heart were being squeezed as in a vice, and as if all the blood had gone from the heart, which

produces a feeling as if the patient must bend double. There is also an inability to walk straight. A fluttering of the heart, which is liable to come on suddenly, is a prominent symptom of *Lilium tigrinum*. A feeling of faintness is an accompanying symptom. There is also a sensation of heaviness in the region of the heart, and a severe pressive pain, accompanied with palpitation. The heart symptoms of *Lilium tigrinum* are worse at night, and are aggravated on lying down. A taste of blood in the mouth is an indicative symptom calling for the administration of this drug, as is also a feeling as if the chest contained too much blood.—*Ibid*.

URINARY ACTION OF APOCYNUM CANNABINUM.—This drug produces, primarily, an increased secretion of straw-colored urine, accompanied with a dull aching pain in the region of the kidneys. Secondarily, a scantiness of the urine, the urine being diminished to fully one-third of its usual quantity, there being little expulsive power in the bladder, and the kidneys being in a torpid condition. It is, therefore, useful in those forms of dropsy in which there is a lack in the eliminating power of the kidneys. It is also a prime remedy in catarrh of the bladder, in which painful and difficult urination are prominent symptoms. Disease of the prostate, with similar symptoms, calls for the administration of the drug. I have seen brilliant results obtained in the treatment of dropsy, in the majority of cases caused by renal lack of elimination.—*Ibid*.

A PRIZE OF \$20,000.—This attractive sum is offered by the *National Academy of Mexico* for the discovery of the *specific agent of exanthematous typhus*, an explanation of its transmittance, and the finding out of a curative serum for it.

An additional \$10,000 are also offered to be distributed among those aiding the above investigations.

Any person, no matter what his nationality may be, can take part in these labors.

The date for the presentations of claims extends to the month of January, 1911.—*Revista de Medicina Pura de Barcelona*.

NOTE.—We would like to ask the illustrious Medical Academy of Mexico if members of the homœopathic school can become aspirants for this offer.

OPERATION ON THE BILE-DUCT.—Dr. Delageniere (du Mans), operating on a patient suffering from suppurative cholecystitis, after resection of the gall bladder, was led to suture the hepatic duct to the choledochus, thus establishing the drainage of Kehr and effecting a perfect cure.—27 Oct. Reported by Dr. Andre Martin, *Journal des Practiciens*.

FOREIGN LITERATURE

CONDUCTED BY E. FORNIAS, M. D.

A BELLADONNA PROVING.—The *Lancet* reports a remarkable case of idiosyncrasy with respect to Belladonna. Forty minims of a mixture of glycerine and belladonna—approximately twenty grains of the extract of belladonna were applied to the patient's leg as treatment of cellulitis. There was no abrasion. Within half an hour the application was followed by swelling of the leg, dryness of the throat and lips, a feeling of forcible retracted nipples, difficult speech, delirium, dilated pupils, sensibility to light, perpetual motion of the hands, and efforts to tear the bed clothes. Normal condition was not thoroughly resumed for four days.

NOTE:—This our opponents call intolerance, but we know better. Let them keep on employing this mixture in the treatment of cellulitis and report results.

BELLADONNA AND ATROPIN.—*How our opponents now study Belladonna:*

Pharmacology:—Belladonna (*Atropa Belladonna*) is a vivacious plant of the group of the *poisonous Solanaceae*. It contains several alkaloids; the most important and the one which constitutes the true active principle—is *Atropin*. It is found in all parts of the plant, but chiefly in the grains, leaves (2.6 p. 1000) and in the fruit. The plant is most active in the month of July, when it still bears its fruit. The parts employed are principally the leaves, then the roots, and rarely the seeds.

Atropin.—Atropin appears in fine, colorless needles, without odor, soluble in 500 parts of water, 8 parts of alcohol, and 43 parts of glycerine. On account of its slight solubility, it is very seldom employed, but two of its salts are always preferred: The *sulphate*, the most frequently used, is a crystalline white powder, very soluble in water, soluble in alcohol, slightly soluble in ether, and represents 85.50 p. 100 of Atropin. The *valerinate* is a glittering, crystalline white powder, very soluble in water, less so in alcohol, and hardly soluble in ether, and represents 70 p. 100 of Atropin.

Physiological Action.—*Absorption. Elimination.* The absorption is easy by the *gastric route*, the *mucous membranes*, and the *subcutaneous cellular tissue*. It is slight and irregular by the skin. Atropin is rapidly eliminated by the *kidneys*.

Local Action.—The local application of Belladonna or Atropin on a skin partially deprived of epidermis, or on the *mucous membranes*, determines a *diminution of the sensibility*, and, in particular, a *diminution of pain* (*ulcerations, fissures, &c.*)

General Effects.—The absorption of atropin given in *therapeutic doses* is translated, by *dryness of the mouth and throat*, with more or less intense fever, and *dilatation of the pupils*; a *stronger dose*, or at least well-tolerated, provokes, among other phenomena, *headache, vertigo, dazzling, &c.*

Nervous System.—The nervous symptoms are brought about by the action of this drug on the nervous system. In effect, *Atropin* seems to *excite the brain*, especially the psycho-motor zone. In the *spinal cord* we observe, first that the reflex excitability is *increased*, and then gradually diminishes until entirely abolished (*toxic effect*). When locally applied, if the nervous terminations become impregnated, we soon notice the development of a marked *sedative and analgesic action*. If one endeavors to determine, by the gastric or hypodermic administration of this remedy, a general analgesia, the result will be only partial. *Belladonna* does not seem to be endowed with a sedative action, but is useful in cough, and sometimes in other spasmodic or painful manifestations, as *vomiting*. The *smooth muscular fibres* (intestine, uterus, bladder, &c.) become excited under the action of *small doses* of *Belladonna*; on the other hand, under *higher doses*, *belladonna*, by its action on the nerve ends, may cause *paralysis*.

Eye and Vision.—An instillation of a *moderate dose* of *Atropin* over the ocular conjunctiva, will determine—first, a slight degree of *myosis*; then—and this is the characteristic symptom—*dilatation of the pupil* with paralysis of accommodation. These effects result from *excitation of the sympathetic* and from paralysis of the *nerve ends of the common motor oculi in the iris and in the ciliary muscle*. The *abolition of accommodation* is due to paralysis of the afferent filaments of the ciliary muscle. We find at the same time, that ordinarily the *ocular tension is increased*. Finally, we observe a certain *diminution of the retinal impressionability*. *Mydriasis*, like other ocular modifications, is only attained after the ingestion of heavy doses.

Heart and Circulation.—At a moderate dose, (and at the first stage of the effects of large doses) *Atropin* excites the encephalic centres of the *pneumogastric* as well as the *intracardiac moderating centres*, and as a result we have a slight abatement of the movements of the heart. This stage is fleeting, often wanting. Soon after, if the dose is strong, we have on the contrary *acceleration, with increased blood tension*. The *acceleration comes on rapidly, and it is durable*. One counts 100 to 140 pulsations, and above. It is attributable to a *paralysis* of the terminations of the *cardiac pneumogastric*. The *hypertension* is produced by *constriction of the peripheric arterioles* by excitation of the vaso-motor centres. If the dose is *high* this spasm is followed by *relaxation of the arterioles*, and the blood pressure will *recede* (case of intoxication). This *vaso-dilatation*, provoked by excessive doses, by allowing the hyperemia of the vessels of small calibre, give rise to the apparition of a true *erythema*, first on the mucous membranes, then on the face, neck, &c. In fact, a greatly increased circulation causes capillary congestion, and we have as a result a *diffused eruption of a scarlet color*, greatly resembling that of scarlet fever. This rash is often produced by *Belladonna* on the skin and fauces, with *dysphagia and sore throat*, and is sometimes followed by desquamation. Finally, the *ameboid movements* and the *diapedesis of the leucocytes* are arrested by *atropin*.

Digestive System.—The chief phenomena observed are: *Dryness and redness of the mouth and pharynx, with painful dysphagia*. The *suppression of the salivary secretion* is due to paralysis of the secretory fibres of

corda tympanica. Suppression of the *intestinal secretions* brings about atony of the bowels with consecutive *constipation*. *Diarrhoea* is also observed, especially if the dose is considerable. The action is variable on the other gastric secretions.

Respiratory System.—At first, the *breathing* is diminished (by *excitation* of the pulmonary ends of the *pneumogastric*); then it is accelerated by *excitation* of the *bulbar respiratory centres*. If the dose is very high, the breathing becomes *superficial*, incomputable, irregular, and diminishes gradually. *Belladonna*, in small doses, is not only a respiratory and cardiac stimulant, but also a *spinal* one.

Secretion.—*Saliva* and the *lacteal* and *sudoral secretions* are arrested. It produces *dryness* of the mucous membranes of the throat, mouth, nose, and larynx; and at first lessens the gastric and intestinal secretions, but soon reproduces them in large quantity. The *urine* seems principally *diminished*, sometimes we find it increased after the administration of small doses. Under *toxic doses* there is a retention of the urine.

Nutrition.—Nothing particular has been observed under therapeutic doses.

Tolerance and Toxicity.—There is nothing reliable about the tolerance of *Atropin*, and one should be very prudent to administer it to a patient for the first time. The *intolerance* is announced by a *lowering of the arterial tension*, *coexisting with precipitation of the heart's beatings*; and becomes manifest by *relaxation of the capillaries*, especially the *redness of the cheeks*. Other evidences of intolerance are: *Active cerebral excitement*, *superficial, panting, breathing, and the diffused rash, resembling that of scarlet fever*. The *intoxication* becomes rapidly manifest five to ten minutes after the *ingestion*, and about two minutes after a *hypodermic injection*. The *symptoms* are: Intense heat and dryness of the mouth and pharynx, rendering *deglutition impossible*; violent thirst, nausea, *red, swollen face*, brilliant eyes, *strong mydriasis*, amblyopia or diplopia, *violent cerebral excitement*, delirium and hallucinations, vertigo, tremors, tottering gait, *rapid disturbed breathing*, strong vascular hypotension, *acceleration*, then *progressive lessening of the cardiac beating*, which becomes weaker and weaker and *irregular, erythematous rash, dryness and insensibility of the skin*, &c. Then the cerebral excitement gives place to *depression*, with drowsiness, and finally *collapse*, with death in *coma*.

It is not necessary to follow the writer into the therapeutic field, we have in the above remarks material for reflexion. It is certainly an interesting study for those who desire to know the origin and relative value of symptoms.—Extract from *Therapeutique clinique et Pharmacologie*. O. Martin, Paris.

ANIMAL REMEDIES OF OLDEN TIMES.—Dr. Gaudichard, in a recent number of the *Repertoire de Pharmacie*, comments on the knowledge of the ancients as regards *opotherapy*, and its various ways of utilization. Thus in the early centuries we find that the products derived from the animal kingdom were in the shape of powders. This primitive notion was necessitated on account of the rudimentary state of all tools of this epoch. preference was controlled by circumstances. In the fifth century, Sextus Placitus Papyriensis advocated the use of the animal vulva, dessicated and

pulverized. In the sixteenth century various parts of animals were first roasted, then burnt, after which pulverization was easily effected. At this period thought was also given to the conservation of organic products by sprinkling them with yellow sandalwood, or surrounding them with wormwood. The animal powders were even combined with other remedies. Baudon, in his pharmacopœia, writes as follows: "The *electuary of lungs* is prepared by mixing sugar with equal parts of the lung of the fox, liquorice juice, maidenhair, fennel and anise seeds." And in the 17th century, Van Helmont places dessicated blood above all other preparations. Organic extracts, though not called by the name, were utilized in ancient times. In the beginning of the Christian era (about 65 A. D.), Dioscorides of Anazarba, a Greek physician, who had gained renown by a treatise on *Materia Medica*, wrote to this effect: "The liver of the hedgehog, dried in the sun in a pot exposed to the full rays of sunshine, taken with honey, benefits and cures diseases of the kidneys and dropsy." A bouillon prepared after a fox's lung has been dessicated, was considered an excellent draught in all cases of difficult breathing. Pliny prescribed hog's testicles, macerated in milk in epilepsy. In the centuries which followed, macerated testicles did not lack in popularity. Joseph du Chesne's favorite prescription as an aid to conception was rams' testicles soaked in brine and then dried. Afterwards they were pounded, macerated, and boiled over a slow fire in two litres of malmsey (Malvasia brine). Here is surely an extract that can well hold its own among all extracts!

Syrups containing extracts from animal organs were not ignored by the ancients. The archives devoted to opotherapy abound with enough instances to show that these preparations were held in high esteem in the earliest centuries. Dioscorides, in his "*Materia Medica*," recommends for a cough the daily use of an electuary composed of the lung and palate of the deer, dried on a dung hill and then thoroughly beaten up with honey. Pliny is of opinion that the best remedy for hæmoptysis is a pate of snails, a preparation not unknown to our modern Pharmacopœia. Incontinence of urine was combated by the administering of macerated bladders mixed with salt or honey, so that absorption might the more readily be affected. In splenic affections John, of Cuba, prescribed beef spleen mixed with honey. And finally Dusseau hit upon what he thought was a great discovery when he evolved his powerful aphrodisiac, consisting of birds' brains, to which were added the yolks of eggs and honey.—*Inter. Med. Journal*.

THE FERMENTS OF LEUCOCYTES IN SEROUS EXUDATES (Zymodiagnosis).—Noel Fiessinger, Pierre and Louis Marie have reported the results of their researches on the leucocyetary ferments in the *exudates*. These ferments are of three classes, namely, *proteolytic*, *lipolytic* and *amylolytic*. The proteolytic ferment characterized the polynuclear, the lipolytic and amylolytic belong to the lymphocytes.

The research of these digestive powers is of the most simple: put on coagulated albumin (white of egg or coagulated serum), on a fat medium (yellow wax or butter), and on an amylaceous medium (starch 1% Sol.) the bottom of centrifugation, or of a deposit of a serous exudate. After 24 hours after being in a drying stove at 55°, temperature at which the ferments exert their action under cover of microbial developments, the co-

agulated albumin is full of deep capsules; a transformation of the albumin in soluble peptones has taken place. The wax plates are depressed by double division of the fats, and the hydrolysed starch reduces the Fehling's solution by heat, and this only when the reaction is positive.

The *polynuclear exudates* (acute non-tubercular pleurisy; acute meningitis, both pneumococcal and meningococcal, and purulent gonococcal arthritis) always digest the albuminous media, while, on the other hand, they do not modify neither fats nor starch.

Lymphocytic exudates (tubercular pleurisy, cirrhotic or tubercular ascites, tubercular or syphilitic meningitis). on the contrary do not alter albumin, but divide neutral fats into two and hydrolyse starch. This reaction is besides inconstant and needs extended sowings.

Zymo-diagnosis becomes then an adjuvant to *cyto-diagnosis*, and, in some cases it may even replace it. This happens in those cases where the leucocytes of the *cytolsyed* exudate are in a state of diffuse disintegration, and can no longer be recognized by their morphology. This change is frequently observed in certain *inflammatory exudates*.

The above mentioned authorities report, as an example, a case of *pneumococcal meningitis*, where the polynuclears did show themselves very scarce, and almost indistinguishable. The intensity of the *proteolysis* permits to affirm not only the presence, but the abundance of the polynuclear elements, which escape our observation on account of the extreme *cytolysis*.

Another example is a *purulent pleurisy*, which only contains debris of figured elements in the way of fatty transformation, but which digest the fats and starch, without altering the albumin. We are then concerned here with pus containing degenerated lymphocytes and particularly with tubercular pus, for the intensity of the reaction allows us to affirm the tubercular nature of the liquid.

Thus, if the *zymo-diagnosis* in a greater number cases is only an adjuvant of *cyto-diagnosis* it is susceptible—in cases where the *cyto-diagnosis* fails—to furnish precious indications, in that which concerns the clinical and anatomical diagnosis of *serous inflammations*.—*Le Bulletin Medical*.

THE POISONS OF THE SPIDERS.—By Dr. E. Fornias. Characteristic indications of both *Tarantula Cubensis* and *Tarantula Hispanica*:

Tarantula Cubensis is indicated in abscesses of the cellular and ganglionar tissues, in furuncles and anthrax, in scirrhus tumors, syphilitic bubos, hectic fevers due to prolonged suppuration, tonsillitis, malignant diphtheria, and osteo-sarcoma.

Tarantula Hispanica has been especially employed in choreic and hysterical spasms, spinal hyperesthesia, and in all reflex nervous excitements of uterine and ovarian origin, especially when the patient is worse at night and better in the open air and by motion; in states of exaltation, melancholia during the menopause, and in nymphomania, &c.

Summing up, we may say that *Tarantula Cubensis* acts principally on the cerebro-spinal nervous system, and that the *Tarantula Hispanica* is more efficacious in functional affections of the nervous system, while *Tarantula Cubensis* rather produces changes in the organic cells.

The first experimenter with *Tarantula Cubensis* (arana peluda), was Dr. Navarra, of Santiago de Cuba, with *Tarantula Hispanica*, the Marquis of Nunez, of Madrid.—*Revista Homeopatica de Barcelona*.

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WHAT BRANCHES OR PORTIONS OF BRANCHES SHOULD BE INCLUDED IN THE WRITTEN, AND WHAT IN THE ORAL EXAMINATIONS?

BY

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(Read before the National Confederation of State Medical Examining and Licensing Boards, at Atlantic City, N. J., June 7, 1909.)

No topic of more vital importance to examiners and examined, could be brought before this Confederation of Medical Examining and Licensing Boards, than that of "Examinations."

"Oral" and "Practical" examinations have long and earnestly been considered by those interested in and engaged in medical licensure and the conclusion seems unanimous that "Oral" tests should be included with the written. In the elaboration and elucidation of the question which is to-day before us, I have been invited to express my opinion as to "What Branches or Portions of Branches Should be Included in the Written, and What in the Oral Examinations?" The branches of medical examination for licensure as prescribed by the law of Pennsylvania are anatomy, physiology, pathology, therapeutics, practice, surgery, obstetrics, chemistry, materia medica, diagnosis, hygiene. In my judgment, *each one* of these branches should include an oral examination in addition to the written. It is not feasible nor necessary, at this time, to fully indicate the ground that each branch should cover, but a few suggestions will suffice. In anatomy, for instance, a candidate for licensure handling a skull, should, in a general way, de-

scribe the orbits and the bones forming each, the fossae, cavities, foramina, canals, grooves, etc., and tell what structures pass through the orifices of the base of the skull. Turning to the skeleton, he should show the divisions of the cervical, dorsal and lumbar vertebrae, stating what features all vertebrae have in common, etc. Let him describe the thorax and indicate the position of the organs it contains; the femur, and the points of attachment of its important muscles; state what muscles of the arm cause flexion, pronation, and extension; locate in the living subject or on the skeleton, the arch of the aorta, and give approximately, the origin and distribution of its branches.

There is such an embarrassment of riches in an "Oral" examination in anatomy, that the above questions are simply reminders of the boundless supply.

While speaking of anatomy, I suggest that entirely too much time is given to this subject *per se*, in State medical examinations. I believe the number of ten or more questions on anatomy could be reduced to five, sufficiently comprehensive to cover a very large territory. So much anatomical knowledge is required to answer the questions in physiology and pathology—and especially in surgery and obstetrics, that I feel the subject would surely receive sufficient attention. More time would thus be allowed for diagnosis, materia medica, and other eminently practical subjects.

In pathology and diagnosis, the candidate may be required to make a physical examination of the chest; examining the lungs, he should state what signs and sounds he recognizes; also, what signs and sounds may appear; considering the heart, he might show the location and describe the character of the apex beat; indicate and map out the mitral area, the aortic area, the tricuspid area and the pulmonary area, stating if he hear any murmurs. He might map out and percuss the liver, saying whether it be normal in size, etc., doing likewise with the spleen; also indicate the normal area of the kidneys. If the wards of a general hospital be available, a practical bedside examination of a fever, or tuberculosis, pneumonia, pleurisy, etc., would be of great assistance in discovering a candidate's medical attainments. Further, in pathology and diagnosis, microscopic work must necessarily be largely in evidence because, in these days, the microscope ought to be as much a part of a qualified physician's equipment, as his surgical instruments or obstetric forceps. He should be given sputum to prepare and

stain for examination for tubercle bacilli; pus to prepare and stain for examination for gonococci; should show the test for the Widal reaction; for the Klebs-Löffler bacillus for diphtheria; should be competent to search for the plasmodium malariae and to examine urinary sediment for casts, for cystic or renal debris, etc.

These may be considered by some, as difficult requirements. But when we realize the number of doctors locating in districts far from the city's free laboratory, in villages or towns which may be decimated by epidemics, it is incumbent upon medical examiners to ascertain whether candidates seeking for licensure are qualified to protect their neighbors from preventable diseases. Has my patient diphtheria? Has he typhoid fever? Has he tuberculosis? These are vital questions to the health and welfare of every community and the qualified physician of to-day, should be able to answer them.

No better subject for oral and practical examination can be found than that of the microscope!

In surgery, abundant material exists for practical examination. Begin with bandaging, then let candidates go through the motions of reducing various dislocations; show the proper dressing for fractured clavicle or the correct splint for a Colles fracture; state the different forms of hernia that may occur, designating by finger each locality; demonstrate the usual location of the appendix; show familiarity with different surgical instruments and explain their uses.

Every physician of experience will agree that practical examination in obstetrics is absolutely necessary. Such an examination can commence by exhibiting to the candidate the pelvis of an adult male, and of an adult female, requiring him to demonstrate how that of the female may be distinguished from that of the male. Obstetric instruments might be shown and practical questions asked concerning their application and use; the manner of adjusting a proper bandage in puerperal mastitis; also the method of introducing and placing a cervico-vaginal tampon. The assistance of an obstetric "manikin" is necessary on which the candidate may prove his proficiency in diagnosing different positions and demonstrating the mechanism of labor and technique of delivery of each in the application of forceps and in the performing of version; in the replacing of a prolapsed cord, etc.

In chemistry, an oral examination is eminently satisfactory

because practical work is easily added. A candidate may demonstrate chemical tests for albumen, for sugar, for phosphates, for chlorides—the latter in the urine, or in water suspected of contamination by sewage; may find the approximate percentage of urea, chemically differentiate mucus and pus. This field is too fertile to require detail.

Oral examination in *materia medica* is practical and easier for examiner and examined than the written. I had eleven years' experience in examining, on this topic, from twenty to thirty applicants yearly, for hospital appointment. The examination was competitive and at first I used the written form; later I found the oral examination abundantly satisfactory in every way. I would ask a candidate to state the pathogenesis or the curative range of certain drugs and his replies infallibly informed me of his attainments—or the want of them. If he knew, he kept close to his text and gave a more or less correct answer. If he did not know, he would wander into rambling discourse, jumbling two or three or even four drugs together as one entity. Occasionally, when an aspirant to hospital appointment found trouble in answering questions of my propounding, I allowed him to describe some drugs of his own choosing; and it was startling to see how little some of the poor devils knew even of their own selection!

What I say of *materia medica* applies to therapeutics and practice, hygiene and physiology. It is *easier* and *more satisfactory* to quiz on these subjects orally, than in writing. If one be on the right track of an answer but become bewildered, a hint from the examiner straightens him out and he proves his worthiness to recognition as being competent—whereas in a written test the applicant may suffer for just one word, the supplying of which might go far to justify his aspirations and desires.

1. In comparing oral and written examinations, the oral appears the easier method for the examiner. He is not obliged to "pale by the midnight oil" poring over manuscript poorly composed, badly spelled and illegibly written.

2. In an oral examination, if an applicant be asked to describe arterial circulation and he stray into the venous, a warning word recalls him to his confines and quickly exhibits his proficiency or deficiency. In the written examination, if unable to answer a *given* question, he can cover pages of foolscap on an (allied?) subject with which he is more familiar.

Thus, unable to answer the question asked, he strives to get credit for telling something else. Every examiner present has had this experience.

3. Many a man can far better reveal his knowledge orally than in writing, thus doing full justice to his attainments. We have seen men who "fell down" badly in a written examination pick themselves up in an oral examination and acquit themselves with credit. One reason for this is that the mind, being under greater stress in an oral examination, feels whipped up and forced to greater exertion. As the time for considering an answer is short and the reply must be prompt, there is a stimulus which does not exist in the dreary drudgery of a written examination. In the latter, the unhappy victim sits biting his penholder and thinks, thinks, thinks of the answer and how to express it; if two apparent answers to the same question occur to his mind he ponders and wonders as to which of the twain is correct—until he becomes lost in an impenetrable daze.

4. There is a special class of applicants who sometimes are obliged to apply for licensure—old practitioners, who, having been in the field for many years and having gained large practical experience, have attained enviable success in their profession. Recognizing the disease almost at a glance on reaching the bedside; knowing what treatment to pursue and what dangers to avert or avoid—they are always safe to employ in time of sickness. Many of these old practitioners make a poor show in writing; but orally, with practical work in the laboratory and at the bedside, they powerfully demonstrate full ability to practice medicine.

The chivalrous State of Virginia has, in its medical law, this merciful provision for veterans: "Physicians who have been in active practice legally for over five years, graduates from reputable colleges, are granted oral examinations."

5. A decided advantage of oral over written examination is elimination of the cheating, which is done in many ways—by impersonation; by leaving books of reference in places convenient of access and resorted to by candidates obtaining permission to "leave the room a moment"; by "ponies"; by direct communication, etc. "Ponies" are written or printed slips, artfully concealed in the hand or deftly mingled with papers lying on the desk and surreptitiously referred to by candidates thirsting for knowledge on subjects embraced in an examination. In cheating by direct communication, he who lacks

knowledge is coached by a well informed neighbor. It is difficult to eradicate this form of cheating because, there lurks in the breast of every man the desire to help a fellow-being in distress—thus a pathetic whisper, “What is the test for albumen?” brings, in a low response, the desired information. There perhaps are still other ways of cheating, for the mind of man passeth all understanding in fertility of invention in the hour of need!

It must be admitted that the element of luck is far greater in oral than in written examinations. Many an instance of good luck, or the reverse, occurs in oral examination which could not possibly happen in the written form. An illustration of a most happy fluke occurred during the examination in geology at the end of my junior year at Princeton College. The examination was oral and on a table before our dear old Professor Guyot—of world-wide fame—was spread a collection of various stones and other species of earth product. One after another of us was called to the front to exhibit our learning, or otherwise, when finally it came the turn of our Classmate Herbert. Herbert, who knew something less of geology than a Hindoo does of ice, had been dreading the examination for weeks, declaring he was sure to flunk dead. “How can I help doing so,” he frequently said, “since I do not know the first *earthly* thing about the blooming subject?” However, when his name was called, he sauntered in an easy manner up to the table and, in spite of the chills which chased up and down his spinal column, tried to appear unconcerned. Professor Guyot picked up a stone from the table and holding it out in his hand, said, “Mr. Herbert, what kind of a stone is this?” Herbert eyed it a few seconds and then, hoping to gain a little time, or for the mere fact of saying something to break the dead silence, coolly said, “That’s a nice stone.” To his intense surprise, Professor Guyot enthusiastically exclaimed, “You are right, Mr. Herbert, it is a ‘gneiss’ stone, though by no means a characteristic specimen. Your recognition of it shows you to be a conscientious and capable student.” Herbert walked back to his seat, the happy possessor of a high mark opposite his name, but amidst the knowing grins and sarcastic comments of his classmates. This was at the end of our junior year and though the days were many and the days were long of our senior year, scarcely one of them passed when Herbert was not

congratulated as a coming Guyot or Agassiz or was invited to lecture upon "How to recognize 'nice' stones."

Of course a written examination is far more indicative of general scholarship because, covering so much wider a field, it exhibits proficiency in penmanship, punctuation, spelling, rhetoric, composition, neatness of execution, etc., all of which are admirable and desirable accomplishments in a physician properly qualified for his profession. At present, these attainments are not required in examinations for licensure to practice medicine. The candidate must show enough knowledge of obstetrics to detach an adherent placenta or to deliver a foetus artificially if not born naturally; of pathology to diagnose and differentiate pneumonia and typhoid fever or diphtheria and mumps; of hygiene, to protect his fellow-beings from the ravages of cholera or the scourge of the white plague. All this, and much more, examiners are legally obliged to take cognizance of and report on; but they may not lower an individual's general average, no matter how bad his spelling or punctuation; how ungrammatical his sentences or illegible his handwriting. I believe these matters will eventually receive their proper recognition and value—and I hope that time is near at hand!

As the standard of medical qualification becomes higher and still higher, as I am sure it will, so must the scope of preliminary education become more comprehensive and its enforcement more stringent. In truth, the former is so dependent upon the latter that the one cannot succeed without the other.

Among all arguments, however, favoring written and oral examinations there is one certain, enormous advantage in the written form, which deserves our fullest consideration because of its exceeding great value, viz.: it affords protection to examiner and examined! In an oral examination one may show so great a deficiency in medical knowledge as to warrant his debarment from the right to practice; yet, when informed of his failure he will, with the utmost effrontery, assert that he had answered the majority of his questions correctly, but owing to the ill-will of the examiner, had not received the high rating he deserved.

On the other hand, one may answer satisfactorily in an oral examination but the examiner may report adversely upon his merits. Perhaps such instances have occurred and possibly they might recur without the protection of the written examination.

The Medical Act of Pennsylvania (Section 11) contains this eminently wise provision: "All . . . examination papers shall be kept for reference and inspection for a period of not less than five years."

This provision prevents partiality or persecution. If anyone thinks a candidate has received his license through favoritism, his examination papers "kept for reference for five years" at Harrisburg, may be "inspected" and they will show whether the license was awarded unfairly or was won by merit. On the other hand, the malice of no examiner need be feared, because, the candidate's written replies testify as to his knowledge and they, being open to public inspection, may be investigated and the fact ascertained whether they have been marked correctly and have received the full value they deserved.

HOMŒOPATHIC PROPAGANDISM: HOW CAN IT BEST BE ACCOMPLISHED?

BY

JOHN B. GARRISON, M. D., NEW YORK CITY.

(Read before the Homœopathic Medical Society, State of New York, at Binghamton, N. Y., September 14, 1909.)

If time permitted, it might be very well to introduce this subject by inquiring into the necessity, at the present time, of propagandizing homœopathy and, if the evidence did not support our contention that the necessity does exist, there would be no further use of following up the question I have proposed of considering the best, or in fact any, means to bring the law of similars more commonly before the public and the time that has been so kindly allotted to me could be used for some other purpose.

I take it for granted, however, that every member of the Homœopathic Medical Society of the State of New York believes that homœopathy is worthy of perpetuation and that, as our friends of the old school are striving by every means the vast machinery of their almost perfect organization gives them, to belittle homœopathy before the public, we must speedily adopt means to counteract their work, or it may soon be that it will be publicly accepted as a fact that the school is as dead as the allo-

pathic prophets declared it would be, half a century ago, and as they are most industriously declaring to-day. It is not enough that you and I know that the homœopathic law cannot be driven out of existence because of its inherent truth. The truth cannot die, it is true, but it may be so fettered that it can scarcely move and thus be unable to reach where it otherwise would. We must offer the protection necessary and in return receive the honor of making it possible to spread the truths of homœopathy far and wide throughout the country.

Granted, then, that homœopathy is still alive and entitled to continued progress, we may properly consider the question, How can we best assist in its propagandism?

Homœopathic law can best be exemplified practically by its use upon those who are sick. For this purpose the simplest way is to have it applied by a physician who has been carefully instructed in homœopathic medicine. During the entire life of homœopathy it has been a matter of notice that when it is introduced into a new locality, converts are rapidly made by reason of the speedy cures that are reported and there is no better advertisement possible. What seems to be the most marvelous cures usually come at first from those who have been for a long time under the care of the best allopaths in the vicinity and have gone to the new homœopath simply as a matter of change and not because they had any faith in homœopathy. As there is nothing so successful as success, so there is nothing that tends to popularize homœopathy so surely as the exhibition of cases of severe illness cured by our system of medicine, "tuto, cito et jucunde."

If, then, homœopathy is best promulgated by the practical method of establishing homœopathic physicians in every city, town and hamlet throughout the country, you may say that the question is solved and that there is no more to do. In theory that may be so, but practically there is one good reason why our work still lies before us, and that is the very important and convincing reason that we have not the physicians.

Taking our own State, for instance, according to the *Medical Century* list, we find that there were 19 deaths among the homœopathic physicians during the year 1908. The two homœopathic medical colleges within our borders gave diplomas to 20 in the spring of 1909. The various hospitals, asylums and sanatoria of our school in New York require 75 internes annually. So you see that there is not much opportunity to do

missionary work by establishing physicians, after all the vacancies are filled with our graduates. The supply does not equal the demand, and upon us rests the obligation to increase the classes in our medical schools.

It seems quite apparent, then, that the first thing for us to do in our work of propagandizing homœopathy, is to plan ways and means to produce more homœopathic graduates. How may we accomplish it?

First of all we must be sure that we have the young men and women at hand and prepared to enter upon the study of medicine. We have the homœopathic medical colleges, eighteen of them, (the Missouri college is under temporary suspension, however) located at convenient intervals all the way along from the Atlantic to the Pacific, and all able and willing to educate students in every branch of medicine, including homœopathic materia medica and therapeutics. Of course some of these colleges enjoy certain facilities which give them superior advantages, but each one is capable of doing good work and is needed to fill the place it was designed for, and every one is striving to elevate its standard each year. No one of them, however, is educating classes as large as it could or ought and we are led to inquire the reason. If we ask ourselves whether the young men and women are preparing themselves for the study of medicine, we find the answer in the fact that last June the literary colleges throughout the country graduated some 10,000 men and women, conferring upon them the Bachelor's and Master's degrees. It is fair to assume that a reasonable percentage of these have medicine in view. Are we getting our share of them? If we are not, who knows why? Our homœopathic medical colleges invite matriculates and their announcements are annually mailed to all homœopathic physicians, asking their co-operation. Perhaps support is not given in the proportion that might be expected, but we are all liable to fall below our intentions for good. The allopathic school has a plethora of physicians and ways and means for the restriction of the output are being planned. They are in many States endeavoring to amend the medical laws to unnecessarily raise the standard of entrance so that only the wealthier classes can hope to enter upon the study of medicine. This they hope will lessen the competition that now exists in the medical field. But is the homœopathic field overworked? Are there no desirable locations to attract our grad-

uates? The Council of Medical Education has a bureau of information and the secretary has on file a large list of locations where requests for homœopathic physicians have come from and in this State alone there are over fifty places waiting for the man to offer his services. All over the country we have locations in places varying in size from small country villages to cities of 20,000 where the right man can enter at once upon a good paying practice, but we have no physicians.

Having, then, young men and women with the necessary educational requirements to enter upon the study of medicine and finally to successfully pass the State licensing examinations; having the properly equipped homœopathic medical colleges to give the medical training; having an abundance of attractive locations to offer our graduates, where ample return for their labor may be confidently expected; above all, having a system of medicine far superior to any other at present existing, being founded upon a law that is unchanging, it does appear strange that the professors in our homœopathic medical colleges sometimes are obliged to lecture to empty seats. Can it be that the fault lies somewhat with ourselves? Let us consider it for a moment.

If every physician who is practicing medicine by virtue of a diploma received from a homœopathic college would exert himself or herself to send *one* student every *five* years to a homœopathic college, there would be no need to discuss the subject of homœopathic propagandism; it would be accomplished. But this is not to be expected, however desirable it may be, and we will find our work waiting for us.

It is possible that we, as a body, are not sufficiently harmonious to make ourselves the power that we might be. We may have too many "camps" among us. The potency question may assume too great a magnitude in the eyes of some to properly benefit us. We are all homœopaths, I trust, so far as our belief in the law of similars is concerned, so why may we not have a gentlemen's agreement among ourselves that homœopathic physicians are, like the Kentuckian said of whiskey, "all is good, even if some may be better than others." Let us rejoice that we have men who are practicing homœopathy by choosing their remedies according to the law of similia to the best of their abilities, and if they sometimes seem to be in error, let us encourage them to better work and not ostracise them. We need a solid front to present to the enemy and every one

who believes in the principles of our school is entitled to a place in the ranks; yes it is his bounden duty to become enrolled.

A little over a year ago the American Institute of Homœopathy, recognizing the necessity for propagandistic work, ordered the Council of Medical Education to take up the work, in addition to former duties and a sum of money was appropriated to commence it. A popular subscription was started by Dr. Biggar at the Kansas City meeting, and a respectable sum was pledged, about half of which has been paid. The work was commenced at once and has been continued to the present time.

It was believed that the first step was to get in touch with the student element and to do so, we took a list of all the literary colleges in the country and then proceeded to get the names of the homœopathic physicians in the towns where the colleges were located and by personal correspondence we were able to assure ourselves that in many cases a majority of the members of the faculty were homœopathic patrons. By this introduction to the faculty, we were able to get in closer touch with the students. We thus got the names of the senior classes and more particularly, we were able to get a list of all those who had announced their thought of medicine as their life work. To these, we sent some homœopathic literature, intended to give a little insight into the law of homœopathy and some reasons "Why Students of Medicine Should Select the Homœopathic School." We also sent a list of these names, with the addresses, to every dean of a homœopathic college, thus placing in their hands, without any favoritism on our part, about 800 names of recent graduates, all in the receptive stage and upon whom they could exert whatever influence they deemed wise. We are waiting, with great interest, for the incoming classes, but up to date we have returns from only one college, which is the Hahnemann of San Francisco, where lectures commenced in August. Here we find a class of 21 freshmen at the last accounts. The total number of students in this college was, in 1907, 29; in 1908, 33; in 1909, 24. A freshman class of 21, the largest in its history, almost equaling the total enrollment for 1909, shows that the Western coast is clearing.

Besides the literary colleges, there are 10,000 high schools in the United States, and of these we have only labored with a very few, distributing our work about evenly in 20 States.

The high school graduates furnish a most desirable class of students for our medical colleges, for they are usually good workers and ambitious; and moreover they may be more likely to enter upon work outside of the large cities than those who have spent so much time in acquiring their literary education. The country needs and will appreciate, good homœopathic treatment just as much as the cities and we ought to make it possible.

Let us be enthusiastic over homœopathy and tell the people of its good work. Let us tell them that it has been proved scientific in the light of all recent investigations and that there is no possible excuse for the faintest heart to apologize for being a homœopath. Our own eloquent and active dean, Copeland, has done a notable work for homœopathy during the past year in preaching the "scientific reasonableness of homœopathy," and such work should be continued, for it seems reasonable that intelligent people will be turned to homœopathy in that way.

Individual work is necessary in the propaganda. Each and every one of you who hears me say this, can do something to forward the interests of homœopathy if you try. The committee cannot be too large and all are invited to join.

Lastly, but by no means least, let me say that money is necessary to enable us to carry on any scheme of propagandism. This year we favor individual subscriptions, rather than subscriptions from societies, although we will be satisfied with either plan. Last year the idea of obtaining pledges from individuals for \$2.00 annually for five years was put in operation first in Ohio and later in Illinois and California, and in this State to a small extent, and a moderate amount was raised in that way. Blanks for like pledges will be circulated at this meeting and will be welcomed when they are returned well filled with names. There are about 700 homœopathic physicians in New York State who belong to no organization whatever, pay no dues and contribute nothing towards the cause that supports them. How shall we reach these?

The Council of Medical Education will be grateful for suggestions as to any improvement in carrying on the propagandistic work and a discussion is invited.

NOTE:—The reports from most of the homœopathic medical colleges are encouraging as to the size of the freshmen classes and the work of the Council of Medical Education is credited for some of the gain.

"COLDS IN THE HEAD."

BY

GEORGE W. MACKENZIE, M. D., PHILADELPHIA, PA.

(Read before Chester County Homœopathic Medical Society, January, 1910.)

WHEN Dr. Webster invited me to read a paper before your Society he offered two suggestions, the substance of which, as near as I can recall, was first to select a commonplace subject, and, second, to treat the subject in such a manner that the general practitioner might receive the greatest amount of assistance in the treatment of his cases.

The first suggestion is easily complied with, for I have selected the subject of "Colds in the Head," which, you must concede, is about as frequent a complaint as one will meet with in general practice. The second suggestion, for obvious reasons, is not so easily complied with as the first; however, I shall do my best.

To begin with we shall avoid treating our subject after the text-book fashion. Instead of a formal paper, we shall have rather a talk with one another about the subject, and before the close of the day I hope to receive as many helpful hints as I may give.

There are other reasons why "Colds in the Head" has been selected as the subject for discussion, to-wit:—not every case of "Cold in the Head" presenting itself to us for treatment is really a case of "Cold in the Head," and because of this very fact, many cases do not yield to treatment as a simple cold in the head should. This happens to the best of prescribers and the weaker of us make the mistake of turning away from our tried and true remedies to seek for proprietary nostrums which must likewise fail to effect a cure. Because a case fails to yield to the indicated remedy is no reason for condemning the remedy. The fault lies in our failure to have diagnosed the case. In its broad sense, I mean we have failed to conceive of the exact nature of the conditions and the possibilities of our remedies.

The average general man bases his diagnosis of and prescription for "Cold in the Head" upon symptoms alone, which is generally sufficient to bring about the desired results. It is true that the average case of "Cold in the Head" will get well

without treatment; however, with proper care and careful prescribing, a greater number will get well and get well more promptly. Indeed, in some cases the cold in the head may be aborted.

There is a feeling of fatalism existing among a large number of physicians which prompts them to be satisfied with the *generally* favorable results obtained in the vast majority of their cases and to neglect to investigate the exceptional cases which do not yield to the ordinary means of cure. This fatalism is soon followed by nihilism and both are bred of ignorance and indifference. It is not uncommon to hear these men making use of such expressions as: "Oh! well, how do we know that we have cured our case? The great majority of cases get well without treatment," and "if the patient is to die, he will die, and if he is to get well, he will get well."

Fatalism is more prevalent among those of the dominant school than among us, which helps to prove the well known fact that we accomplish a greater percentage of cures than they. The very fact that the homœopath with his indicated and, too, potentized remedies does accomplish so much, tends the more to cause him to neglect his diagnosis, and the diagnosis is very essential to the successful treatment of the *exceptional* cases referred to.

The homœopath, at times, witnesses such phenomenal results that he is fairly astounded; results which he is unable to explain. His very success with his remedies leads him too often to neglect an objective examination, when an objective examination would do much to encourage him and prove his success to himself and to others.

The failures are not all on the side of the general man, for we find specialists, too—especially those who have had insufficient experience in general medicine—failing in the treatment of a certain class of cases which might do better in the hands of a good general man.

At this juncture I will cite a not infrequent circumstance. A patient reports to a specialist with the history of having contracted a "Cold in the Head" with a moderate to a profuse amount of sero-mucous discharge from the nose, which upon examination shows the mucous membrane to be quite red and somewhat swollen, shrinking to normal dimensions after the use of cocaine; otherwise the nose may show nothing abnormal. The specialist treats the case as one of acute Cold in the Head,

using local applications and an otherwise routine treatment for Cold in the Head. After a reasonable length of time the condition does not improve and, if anything, the local applications aggravate rather than improve the condition. Eventually, the case falls into the hands of a good homœopathic prescriber who has been taught to prescribe upon the *totality* of the symptoms. With one or two prescriptions the case is cured, much to the chagrin of the specialist.

The explanation of this is not difficult. The patient's nasal condition has been brought about by the presence of some auto-intoxication due to the insufficient elimination of endogenous toxic substances which have been finding their way out of the organism through all the possible channels of exit. The irritating effect of the toxic substance upon the mucous membrane generally is to produce a hyperaemia with swelling and redness; while its specific effect upon the mucous glands is to increase the amount and alter the character of the secretion. The homœopathic prescriber has wittingly or unwittingly by prescribing upon the *totality* of the symptoms reached the source of the trouble in some distant part of the body.

Similar results are obtained in cases of lateral pharyngitis due to so-called rheumatism, where local treatment is not half so useful as a dose or two of *rhus tox*, *merc. viv.*, or some other indicated remedy. This is true, not only of endogenous toxins, but also of exogenous toxins, administered sometimes as medicines. How many cases of supposed "Colds in the Head" are due to the administration of iodide of potash, arsenic, etc.? These are the cases with which the true homœopath seldom meets, but when he does, he promptly effects a cure. Again, he gets results in cases of acute and chronic oedema of the mucous membrane of the nose which the specialist, unless he be an excellent homœopathic prescriber, fails to get.

On the one hand, these successes strengthen our faith in homœopathy, while on the other, it tends to make us careless in our examinations and the making of exact diagnoses.

There are a certain percentage of cases due to conditions which neither homœopathic prescribing nor any other form of medication will effect a cure. These may be divided into classes, as follows.

I. THOSE CONDITIONS WHICH ARE ORIGINALLY OR PRIMARILY MECHANICAL. For instance, septum deviations, spurs

or spines on the septum, synechias (adhesions between the septum and the turbinates) all of which lead to interference with free nasal respiration. To fully appreciate the importance of perfect nasal respiration to the general condition of health, one needs but to read a recent article published in the *Annals of Otology, Rhinol. and Laryngol.*, Sept. 1909, entitled "Nasal Obstruction: Experimental Study of its Effects upon the Respiratory Organs and the General System," by Dr. Willis S. Anderson, or compare the condition of the patient before and after operation for their correction.

Interference with nasal respiration is not the only symptom of which these patients may complain, for we find some cases suffering from very severe trifacial neuralgia through the reflex irritation produced by pressure upon the anterior and posterior ethmoid nerves (branches of the ophthalmic division of the fifth), especially in the high deviations of the cartilaginous septum. Very frequently the neuralgia is limited to the supra-orbital or ocular regions of one side, a condition which has been falsely supposed to have been due to eye strain. An interesting article upon this subject may be found in the *Annals of Ophthalmology*, Oct., 1909, under the title of "Reflex Asthenopia from Intra-Nasal Pressure," by Dr. M. L. Foster.

II. THE SAME CHARACTER OF PRIMARY MECHANICAL CONDITIONS AS IN CLASS I BUT LESS PRONOUNCED. Alone these may be insufficient to cause symptoms, but when combined with thickening of the mucous membrane (diffuse hyperplasia resulting from chronic catarrh) the same group of symptoms are brought about as in class I.

In this class of cases, since we have a mixed condition, the treatment should be a mixed one; mechanical for the mechanical factors and medical for the catarrhal.

III. THOSE CONDITIONS WHICH WERE PRIMARILY PATHOLOGIC BUT HAVE LATER BECOME MECHANICAL. We might term these conditions secondarily mechanical. For instance,

(a) *Firm polyps* which because of their presence lead to obstruction to nasal respiration or in some instances to obstruction to the outlet of pus from one or more of the accessory sinuses or which because of pressure lead to headaches or neuralgia.

The treatment should be immediately mechanical, but after

removal the treatment should be medical to correct the primary condition which brought it about.

(b) *Large circumscribed hyperplastic areas* leading to interference with nasal respiration, excessive discharge, headaches and a long list of secondary symptoms. Those symptoms which are due directly to the mechanical presence of the hyperplasia call for mechanical treatment after which the primary condition should be treated medicinally.

(c) *Hypertrophied adenoids*, when they lead to interference with nasal respiration or the proper ventilation of the Eustachian tube or to profuse nasal or pharyngeal discharge; and especially when combined with the history of frequent attacks of colds accompanied with earache. I will grant the concession here that internal remedies may be tried for a reasonable length of time; the length of time necessary to wait varies considerably in the minds of different men. My personal opinion is that the general man tends to wait entirely too long. I wish to emphasize an important fact that a very small adenoid, laterally placed will often lead to more frequent and greater ear complications than a larger one more centrally placed; and we must bear in mind that the adenoid is not infrequently responsible for the patient's death, because of some resulting ear complication. We shall not touch upon the subject of tonsils, since I have confined myself to the nose.

IV. PATHOLOGIC PROCESSES IN CERTAIN CAVITIES WHICH BECAUSE OF THE NATURE OF THEIR ANATOMICAL MAKEUP PREVENT THEM FROM DRAINING WELL (empyemas of the accessory cavities). These cavities, although they follow, in a way, a general plan, exhibit widely divergent developmental variations. In some cases the opening is so large that a temporary or permanent occlusion is almost impossible. Again, the nature of the cavity may be so simple in structure as to favor its drainage. On the other hand, we meet cases where the opening is small and the cavity of the sinus so complicated in structure because of the presence of septae that drainage is imperfect. This latter class of cases are they which, in case of infection, are prone to develop chronic empyema. Naturally the treatment should be first to transform the latter group of this class into the first by the simplest and safest means of mechanical treatment at our disposal; after which the case should be treated both locally and medicinally.

V. THOSE CONDITIONS RESULTING FROM THE INTRODUC-

TION OF FOREIGN BODIES INTO THE NASAL CHAMBER. They are recognized by profuse, purulent one-sided discharge, occlusion of nasal breathing on one side, the sensation of pressure, one-sided headache or neuralgia, with occasional fever (the result of absorption of the toxins from the foreign body itself or from the resulting infected nasal secretion). The treatment naturally calls for removal.

VI. THOSE DISEASED CONDITIONS WHICH INDIRECTLY LEAD TO THE FORMATION OF SEQUESTRAS, WHICH ACT AS FOREIGN BODIES, giving rise to much the same group of symptoms as in class V. Typical example of which is found in the sequestra which results from the breaking down of a syphilitic gumma of the septum.

The treatment is the same as for class V followed by medicinal treatment for the primary condition.

VII. TUMORS. This forms such a large and diversified class that the writer will not attempt their classification, symptomatology and treatment at this time, further than to say that the same applies here as elsewhere in the body with the modifications which naturally result from the differences in location.

All of the above classes of diseases have been repeatedly diagnosed and treated as cases of simple "Colds in the Head," or catarrh by those general men who do not practice rhinoscopy, but depend upon the history and symptoms alone for their diagnoses.

The paper is rather general and merely touches upon a large field. My intention has been to point out certain existing facts, with the object of bringing about a better understanding between the general man and the specialist. The general man is not so stupid as some of the specialists would have us believe, nor is the specialist so narrow as some of the general men claim. If they would manage to get together oftener I am sure that much benefit would accrue to both.

CHRONIC MYOCARDITIS.

BY

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(Read before the Germantown Homœopathic Medical Society.)

A CONDITION which is variously designated as fibroid degeneration, cardio-sclerosis, fatty degeneration, or myofibrosis—as the writer's conception of the pathology may be. Or perhaps more correctly from a clinical standpoint as chronic cardiac inadequacy—myocardial insufficiency, the senile heart, etc., or the title we have selected—chronic myocarditis, which begs the question of pathology.

Pathologically, there are several types of chronic degenerative changes common to the heart muscle, which, clinically, are indistinguishable. Usually it is either a fatty, or a fibrous degeneration, caused by vascular changes interfering with the nutrition of the myocardium.

Clinically, there is no way to determine either the nature or the extent of the alteration.

The microscope reveals a number of changes, with a decided lack of uniformity in the relation of the findings to the symptoms, and in all probability the character of the degeneration is not so important as its situation.

We will confine our remarks to that form of myocardial degeneration which occurs in persons of middle age and after, which is not due to and not associated with valvular disease.

Age, broadly speaking, is the factor of greatest importance in the etiology of such conditions. Some persons, for their years, are older than others, as the result of heredity, environment, habits, and acquired diseases with their sequellae.

A history of gout, alcoholism, over-indulgence in tobacco and the good things of the table, should be considered. Influenza, especially, and other infectious diseases, and, as I have noted in several instances the long-continued use of acetanilid, and other coal tar products, in the form of headache powders; all have their insidious affect on the myocardium.

Associated pulmonary and nephritic changes have likewise a distinct influence in slowly developing degenerative changes in the myocardium, by imposing greater and greater demands upon the organ than are warranted by its impaired nutrition.

However, we are particularly concerned with those changes associated with diffuse arterial degeneration.

Extensive arterial degeneration may be present for which we can ascribe no definite cause. No doubt in many such cases the cardiac, as well as the renal and cerebral changes, are purely secondary.

Mackenzie says in this connection that "one of the most striking changes that takes place in the progress of arterial degeneration is the diminution of the capillary field. This obliteration of the capillaries is likely to be found of the greatest importance, not only in the production of the degenerative changes that occur in the heart itself, but by narrowing the communication between the arterial and the venous system, it entails more work on the heart in forcing the blood through the constricted area.

"This diminution of the capillary field, so easily recognized in the external body wall, also occurs in the heart, and the result is shown in a variety of ways. It leads to malnutrition of the tissues and degeneration of the heart muscle. The character of the degeneration varies according to the structure affected, but in all it leads to impairment of function." If it be borne in mind how dependent the muscular structure of the heart is upon an abundant supply of blood, it will be easy to recognize the fact that such changes must have a profound effect upon the efficiency of the organ.

As said before, there is a great diversity in the symptoms arising from an impaired myocardium.

This variation is in all likelihood due to the different parts involved by the degenerative process. As we acquire a better knowledge of the function of the different parts of the heart, a more satisfactory understanding and explanation of the symptoms will be obtained.

In this above all cardiac conditions "a thorough appreciation of the patient's own experiences is of more value in arriving at a correct estimation of the heart's efficiency than the most elaborate methods of physical examination." (Mackenzie.)

As in any type of heart disease, the commonest symptom which leads the patient to seek medical advice is breathlessness. Breathlessness, out of all proportion to the exertion undertaken, is the common complaint.

It may be a paroxysmal air hunger, occurring when the pa-

tient is at perfect rest, usually at night; a condition spoken of as cardiac asthma.

The causation of respiratory symptoms in cardiac diseases is very interesting. The breathlessness of exertion, the cough and tendency to bronchitis are directly traceable to disturbance in the pulmonary circulation. Cardiac asthma possibly, and Cheyne-Stokes breathing, certainly, are due, on the other hand, to faulty circulation, or impaired blood in the medulla.

Inadequacy of the left ventricle may first show itself in a chronic congestion of the bronchi and a simple irritative dry cough result, which resists the most carefully selected remedy until attention is directed to the heart. Possibly vagus irritation is a factor in the production of this cough as in mitral stenosis.

A tendency to acute bronchitis is frequently present, and in old cardiopaths a chronic bronchitis with its distressing morning cough is a constant feature.

Palpitation may be the only symptom directing attention to the heart. It is, of course, a common cause for complaint in those actually afflicted with abnormal heart conditions, as well as with those who think they are.

Tachycardia, either constant or paroxysmal, is frequently observed. A pulse constantly over 100 is common.

Recently a gentleman, aged 54, under my observation for several weeks, invariably presented a pulse about 120. He complained simply of exhaustion and dyspnoea on exertion. He had the traditional signs of myocardial degeneration with low blood pressure, and his clinical course was confirmatory in that the ordinary drugs had no appreciable effect on his heart, or sense of well being. Digitalis simply tightened up his arteries and increased the heart rate to 140.

At last I persuaded him to abandon smoking entirely. He had used tobacco excessively and constantly since he was 16 (38 years). His improvement was impressingly prompt. In a week or two his pulse had come down to 68, under ordinary circumstances. The first sound at the apex became greatly improved in intensity, and quality, and the regurgitation due to a relative muscular insufficiency at the mitral orifice entirely disappeared.

Pain or distress in the cardiac region is a symptom of real value, and not to be lightly regarded. It results from an increase in the intraventricular blood pressure, to which the heart

does not readily accommodate itself, and frequently is dependent upon exertion.

The pain arising from myocardial disease varies greatly in severity. It may be nothing more than a dull precordial distress or tightness. On the other hand, it may amount to a true angina pectoris.

Angina pectoris, in the absence of a valvular lesion, is confirmatory of sclerosed coronary arteries with an insufficiently nourished, hence a degenerated, myocardium; and the typical attacks occur under just such conditions.

An attack of true angina pectoris coronaria is unmistakable. The indescribable anguish, the ashen gray face, the clammy skin, the icy extremities, present an unforgettable clinical picture. Such an attack may be the first intimation of a diseased myocardium—and it may be the last.

Examination of the heart during an attack of angina, may discover surprisingly little that is abnormal. The pulsations may be regular and uniform, the heart sounds good, and the arterial tension not apparently increased. The most severe cases are possibly those in which the least that is abnormal can be detected.

I recently saw a gentleman about three hours after the beginning of a severe attack of angina pectoris. He was sixty years old, and had never had cardiac symptoms until a week or ten days before the seizure—and then only moderate precordial pain on exertion. When I saw him his pain had been somewhat relieved by morphia. He was ashy white with the typical anguished expression. He was covered with cold sweat, the nose, ears and extremities were icy cold, he was vomiting at frequent intervals (an ominous symptom in cardiac conditions), and complained of terrible pain throughout the left chest, extending into the neck and down both arms to the wrists, where it abruptly stopped. The pulse was 80, perfectly regular in force and rhythm, of good volume and high tension. The heart showed some dilatation, the left edge being two cm. outside of the nipple line. The first sound at the mitral area was devoid of muscular element and accompanied by a short, faint, high-pitched murmur, evidently due to muscular insufficiency of the mitral orifice. Vasodilators gave no relief.

This gentleman lived about a week after the onset of the attack, during which time he was never entirely free from pain. There was no evidence of circulatory failure; his pulse re-

mained perfectly regular, and never exceeded 100; the first sound did not regain any muscular tone (an important prognostic observation). The murmur disappeared at times, and was not heard during frequent examinations for two days before his death. Death came suddenly, but not unexpectedly, for but a half hour previous he dictated a letter concerning his final wishes, and calmly informed me that he would not live to see another day; thus exhibiting that almost supernatural premonition of death which is not uncommon in cardiac cases. The symptoms in this case point to thrombus formation in the descending branch of the left coronary.

In angina the pain, in my experience, is usually referred to the sternum, or it may arise in the epigastrium and gradually extend throughout the chest and down one—usually the left, or even both arms.

It must be borne in mind, that a general sclerosis of the splanchnic vessels, especially of the stomach, may be associated. Any group of these vessels may exhibit similar phenomena. The action of the coronary vessels in angina has been likened to intermittent claudication as it occurs in horses and men when the blood supply in the femoral arteries is interfered with. It is essentially a spasm of the arteries with resulting ischemia. This will explain the gastric symptoms associated with angina, and with the myocardial condition under discussion, and likewise the frequency with which acute indigestion is assigned as the cause of death.

Arrhythmia in the form of intermissions occurring at regular, or irregular intervals, is an early and persistent sign. Pathologically, there is no distinct relation between the extent of the disease and the degree or variety of the irregularity. Probably the location of the degeneration is here again the important factor. Arrhythmia points particularly to involvement of the auricular walls and the bundle of His with consequent interference with conductivity of the contractile wave. Vagus stimulation is undoubtedly a factor, for acute gastric conditions, for instance, in these subjects, may give rise to an alarming disturbance of the cardiac rhythm, which entirely disappears upon recovery. The observation of such a disturbance has more than once led me to investigate the cardiac status, and determine the presence of degenerative changes.

Information of the greatest importance concerning the condition of the myocardium, may be obtained by the readiness with

which arrhythmia is elicited. Frequently having such a patient climb a flight of stairs, will cause a regularly acting heart to become markedly irregular in force and rhythm. Naturally, the observation is of the greatest value in formulating a prognosis.

The examination of such a heart as we are discussing may show surprisingly little out of the normal to the casual observer, and the diagnosis may be far from easy. As Cabot says: "For the recognition of these changes in the myocardium, our present methods of physical examination are always unsatisfactory, and often wholly inadequate. Extensive degeneration of the heart wall is not infrequently found in autopsy when there has been no reason to suspect it during life. On the other hand, autopsy often fails to substantiate a diagnosis of degeneration of the heart muscle, although all the physical signs traditionally associated with this condition were present during life." To a great degree then, more so than perhaps we care to admit, a diagnosis of myocardial degeneration has to be based principally upon the symptoms and history of the case, and an exhaustive search for confirmatory signs be instituted, together with a careful estimation of the functional capacity of the heart. Even then we may not be able to determine to our satisfaction the presence of degenerative changes, but be compelled to be satisfied with a diagnosis of cardiac insufficiency. The objective data which warrant such a diagnosis are well known. Usually a slight, and only a slight increase of deep cardiac dullness can be demonstrated, unless there has been a long-standing Bright's. In the male chest the presence of inelastic walls and emphysematous lungs, serve to increase the difficulty, and in the female chest, it is frequently impossible to locate the left border of the heart. Great hypertrophy is incompatible with marked fibrous or fatty degeneration, provided it was not present before the degenerative change took place.

Auscultation will discover some general weakness in the heart sounds. Of greater importance is a detection of some deviation from the normal in the individual tones; for instance, the muscular element of the first sound in the mitral area may be impaired, or even absent; the first sound becoming feeble, valvular or impure, so that in quality the two sounds approach each other very closely, or as in a case which I examined to-day, the accent may be on the second sound at the apex. The

first sound at the apex may be accompanied by a faint high-pitched whiff of a mitral insufficiency. This may be only demonstrable after exertion, hence purely muscular and not due to diseased valves. If the heart is doing its work fairly well, the second sound in the aortic area is apt to be loud, sharp and ringing, denoting a heightened systemic pressure, or a dilated, or dilatable and inelastic aorta, which may be confirmed by finding slight dullness in the right, first interspace. In this area is frequently heard a harsh murmur of moderate intensity, not replacing nor impairing the sound of the closing semi-lunars. This would point to sclerosis at the beginning of the aorta.

A study of the second sound in the pulmonic area is of utmost importance, as in any cardiac disease. A feeble second sound in either the pulmonic or aortic area is naturally of great prognostic value, denoting as it does marked weakness of the corresponding ventricular muscle. When such weakness is present, signs of circulatory failure are not long delayed.

Arteriosclerosis to a greater or less extent may be, and usually is, present in the palpable peripheral arteries, but, as is well known, this is no index of the condition of the cardiac, and splanchnic arteries in general. If sclerosis of the aorta or coronary arteries can be diagnosed, cardiac degeneration may be taken for granted.

The effect of exercise should be noted, for in the presence of meagre reserve strength, circulatory symptoms may be readily excited.

If the weakness is purely functional, the heart "rises to the occasion." If degenerative changes are present, the signs and symptoms may be greatly aggravated by exertion.

This brings up the question of estimating what a heart can do, what is its reserve strength, or its functional capacity, or its field of cardiac response? Call it what you will.

In the absence of gross signs, or symptoms of muscular insufficiency, this estimation becomes tremendously valuable, and enlightening.

The means at our command are to subject the heart under examination, to work, Measured quantities of work if possible. For instance, a heart such as we are considering under quiet conditions, may appear to be doing its work easily, with a pulse about, or not much over the normal rate. Subject the patient to some simple exertion, such as hopping about the office, and the fact that the heart is working close to the top of its reserve

strength is shown by an increase in the number of its contractions, which become more feeble and less complete. A rapid, and a weak pulse, probably intermittent with or without dyspnoea develops. The murmur of a muscular mitral insufficiency may be detected for the first time.

A less violent experiment is to note the action of the heart after a change in position.

When the heart is seriously weakened, the normal difference between the pulse rate in the standing, and that when in the recumbent position tends to disappear. This is a simple procedure; count the pulse while the patient stands, and then while he lies flat. Normally there is a slowing of from seven to fifteen beats per minute. This difference is diminished or lost in the presence of serious myocardial weakness, the heart remaining at the same rate, or becoming faster after taking the recumbent position.

It is comparatively easy to subject the heart to a measured amount of work and accurately note the effect by using Gräupner's test.

Gräupner found that after the pulse rate has risen, and again fallen to normal as the result of exercise, the systolic blood pressure begins to rise; reaches its maximum some minutes later than the pulse rate, and then gradually falls to or below the normal. In seriously weakened hearts there is no rise in the systolic pressure whatever, but it gradually declines from the start, then gradually ascends to the normal. As Cabot says, this may be easily verified by running quickly up two flights of stairs, then stop and count the pulse. After the immediate acceleration is past or during the slowing of the pulse following it, you will note that the heart beat and the strength of the pulse become markedly accelerated. One feels the thump, thump of the heart against the ribs much more strongly after the pulse has almost, or quite reached its normal rate than during the period of acceleration. With this test the actual amount of work done by the individual, may be calculated in foot-pounds by multiplying the number of feet ascended, by the number of pounds the individual weighs. The blood pressure is taken before, and at two-minute intervals after the exercise, which usually lasts about one minute.

Dr. Golden in a recent article has called attention to these and other simple tests, which are of great value in this connection.

Finally, in regard to diagnosis it is well to remember that cardiac symptoms first complained of after middle life, that are not obviously due to some intercurrent disease, or some disturbance of the mechanism of the heart (such as a diseased valve) will warrant a diagnosis of myocardial degeneration.

The prognosis, of course, depends upon the degree of degeneration present, and no pains should be spared to estimate the existing damage. This can not be repaired, it is true, but by early recognition, and with careful supervision of the life and habits of the individual down to the minutest detail, and careful medication, these patients are usually spared long enough to fall victims to some intercurrent malady. Careful supervision and prolonged observation presupposes a tractable patient. Unfortunately, the personal equation too frequently enters largely into the ultimate outcome. Many times a gouty, irascible patient is beyond the control of any physician, and when it comes to introducing changes in lifelong habits of eating and drinking, our success is not flattering. Such patients you cannot frighten when they feel fairly well. On the other hand, it is not always wise to apprise the patient of the existing conditions, for a state of hypochondriasis may result.

Concomitant conditions may determine the outcome, and it goes without saying that every organ should be thoroughly investigated, and its influence on the prognosis carefully weighed.

However, the facts remain, that more glaring prognostic errors are made in heart conditions than in any other class of diseases.

Sudden death is a frequent termination, but while we may be morally certain such will be the outcome in a case under observation, it is not always wise to communicate the fact to the patient or his family.

The treatment of myocardial degeneration resolves itself into a matter of detail. Recognition of the condition before the normal reserve strength is seriously encroached upon, calls for a thorough investigation of the patient's habits, and constitutional tendencies.

Heart strain should be carefully guarded against, for more damage may be done in twenty seconds by a thoughtless rush up the elevated steps, for instance, than can be remedied in the remaining days of such a life. Anything that is likely to put a sudden severe or prolonged strain upon the heart's limited pow-

ers of endurance should be carefully guarded against. Too strenuous application to business should be curtailed. The patient should be instructed to play more, and work less. Unusual business strain, domestic or social causes for anxiety, may be the cause of a breakdown.

High pulse tension should be carefully considered. Its causes determined if possible and removed. But the mere presence of an abnormally high tension should not lead to the careless exhibition of vasodilators, or the last stage may be worse than the first.

The amount of exercise advisable is a matter for thoughtful consideration. A certain amount is distinctly beneficial in such cases, too much may be fatal.

When myocardial incompetence has been once established there is little hope of regaining more than temporary improvement, although with rest, careful attention to the details of diet and hygiene, sparing medication, passive movements, and the wise use of brine baths, remarkable recuperative powers may develop.

The symptoms arising in the course of this disease are so manifold, that it is manifestly impossible to discuss even the approved methods of treatment in the time at our disposal.

PRIMARY SPLENOMEGALY; SPLENECTOMY AND RECOVERY.

BY

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(Read before the New York Homœopathic County Medical Society and the Clinico-Pathologic Society of Philadelphia, November, 1909.)

THAT splenomegaly may be properly appreciated and discussed this evening, I feel it to be best that I should present the subject systematically and in detail. First, the anatomy of the spleen; second, its physiology; third, the diagnosis of splenomegaly; fourth, its treatment; fifth, the report of a case.

Certain organs in the body form a material, or secretion, which is not conveyed away from them by means of a duct but which is introduced into the vascular system through the veins or lymphatic vessels, and which appears to be essential to both health and life. In the case of most of these organs

this secretion exerts a potent influence upon the nutrition and metabolism of the body. Such organs are known as ductless glands and among them are the spleen, thyroid body, the parathyroids, suprarenal bodies and lymphatic glands. The spleen is the largest of these, and the one that attracts attention especially at this time.

Its form is largely determined by its environments and by the pressure it is subjected to by parts and organs in juxtaposition. It is the most variable in both shape and size of all of the abdominal viscera, changing in position with the movements of the stomach, having its longest diameter vertical when the stomach is contracted and horizontal when it is distended.

The spleen is essentially a lymphatic organ, is of purplish color, of very friable structure and is situated deep in the left hypochondrium. Its length is 12 to 15 cm. ($4\frac{1}{2}$ to 5 inches) and its average weight is 170 grms. (7 ounces). Its outer, or postero-external surface is evenly convex, gives to the organ its general outline and shape, and is in contact with the diaphragm which separates it from the ninth, tenth and eleventh ribs (and at times the eighth also) while its long axis coincides with the long axis of these ribs, i. e., extends downward and forward. Let it be remembered that the spleen is behind the fundus of the stomach, and not to the left of it, which fact places it in the back rather than in the flank. The anterior border is fairly sharp and in 95 per cent. of the specimens is notched at one or more points. The posterior border separates the outer phrenic from the inner renal surface. The latter is distinctly concave and is in contact with the left suprarenal body and kidney. The gastric surface is much larger than the renal and is in front of it upon the inner aspect of the spleen. This is concave, moulded over the fundus of the stomach and presents the hilum of the organ. The lower part of it is in relationship with the splenic flexure of the colon, and the tail of the pancreas may come in contact with it. The spleen is completely enveloped by peritoneum, which is reflected upon the splenic artery and vein at the hilum, these structures constituting the pedicle of the organ. The spleen has three peritoneal attachments: first, the lieno-renal ligament, a double fold of peritoneum which passes from its inner surface to the front of the left kidney; second, the gastro-splenic omentum, which passes from its hilum to the fundus of the stomach and between whose layers run the left gastro-epiploic artery and vasa brevia, branches of

the splenic artery destined for the stomach wall; and third, the phreno-colic ligament, a shelf-like fold derived from the great omentum, stretching with its free edge forward from the abdominal wall in the region of the eleventh rib to the transverse colon, so as to form a floor, or niche, in which the spleen rests. The so-called suspensory ligament of the spleen is an inconstant fold extending from near the esophageal opening of the diaphragm to the top of the spleen. The interior of the spleen is divided into lobules, measuring about 1 mm. in diameter and containing a highly vascular lymphoid tissue, the splenic pulp. Within these collections of lymphoid tissue course the terminal arterioles of the splenic artery, while the venous spaces, or intralobular veins, arise outside of and between them. The intralobular veins are tributaries of the larger interlobular veins found at the periphery of the lobules and these emerge at the hilum to form the splenic vein.

The pulp cells consist of (a) small mononuclear lymphocytes; (b) leucocytes of the mononuclear and polymorphonuclear types; (c) red blood cells; (d) nucleated red cells; (e) large phagocytic cells containing disintegrating red blood cells or pigment particles derived from the destruction of the same; and (f) giant cells with large composite nuclei. A variable amount of free pigment is also present, probably from the broken-down red blood cells.

The arterioles of the splenic artery upon entering the lobule become surrounded by a quantity of lymphoid tissue. These local accumulations are Malpighian bodies or splenic nodules, and are identical with true lymph nodes in their histologic character. Accessory spleens, or spleniculi, are common and are usually found near the hilum in the great omentum. As a rule they are about the size of a pea, and while resembling the spleen in color, many of them have no Malpighian bodies. We must conclude, therefore, that they are rudimentary in structure and probably are incapable of performing perfect and full splenic function.

(I offer no apology for presenting the anatomy and physiology of the spleen in this paper. My reasons for doing so should be obvious. Vide article by Wm. J. Mayo, M. D., in *Journal of American Medical Association* for Jan. 1, 1910, entitled "Principles Underlying Surgery of the Spleen").

Even to-day the physiology of the spleen is unsettled and at best somewhat indefinite. That it is a blood-making, blood-re-

juvenating organ, however, is established. It has been called a blood filter, and it is here alone, among its histologic elements, that the blood is brought directly in contact with the structure of the organ. Kölliker and Ecker have described the spleen as a scavenger for the dead and effete erythrocytes. They found in the blood of the spleen large white cells possessed of ameboid motility, and in the interior of which red cells in various stages of disintegration were found. The pigment seen in the large phagocytic cells and the free pigment found in the lobules of the spleen, referred to above, is supposedly the result of this erythrocytic destruction. In the lowest order of vertebrates, the fishes, all the red blood cells are derived from the spleen; in them the bones do not contain marrow, while in man the bone marrow is believed to be the chief source of the red blood corpuscles, Starling stating that the evidence that red cells are produced in the spleen is inconclusive. The spleen does undoubtedly produce red corpuscles during fetal life (and shortly after birth) but there is no reliable testimony that this ability exists in adult life.

The chemical composition of the spleen is characterized by the presence of a large percentage of iron, existing as an organic compound of some kind, which suggests the possible function of the formation of new hemoglobin. This suggestion is supported by the observation that after splenectomy there is a progressive daily loss of iron from the body.

Aside from its effect upon the blood, direct or indirect, the spleen performs other functions. Protrypsin is believed by some to be its product. This, passing into the blood, is converted into trypsin by the pancreas. Splenectomy is followed by a diminution in the production of trypsin by the pancreas, and if an extract of spleen be injected into the circulation of a spleenless animal, the amount of trypsin formed is increased.

Enlargement of the spleen occurs physiologically during digestion and pathologically as the result of or association with many known correlated conditions, while at other times the cause is entirely unknown and undiscoverable. Pathologic enlargement may be due to simple hypertrophy, which is not accompanied by any marked or constant changes in the blood and the origin of which is still an enigma; to splenitis, usually of hemorrhagic, traumatic or of pyemic origin; to malaria, then commonly known as "ague-cake"; to leukemia, in which disease the splenic enlargement and blood changes occur early;

to pseudoleukemia, or Hodgkin's disease, where enlargement of the spleen and blood changes occur late and follow the formation of multiple lymphomata; to syphilis; to neoplasms, usually secondary and most frequently sarcoma. (Moynihan states that carcinoma of the spleen has never been recorded in any case which will bear investigation).

So much uncertainty and confusion exist to-day among authors as to the exact clinic and pathologic make-up of diseases characterized by enlargement of the spleen with associated blood changes, as to cause one to think twice (even with every bit of available evidence at hand) before declaring a positive diagnosis. It will be sufficient for us in this writing, however, and wisely practical, too, to consider a differential diagnosis between leukemia and splenomegaly only.

The former, leukemia, is a disease attended by splenic enlargement, this appearing before or after the blood changes assert themselves. Only by examination of the blood can splenomegaly be distinguished from leukemia. The blood of leukemia is characterized by an enormous increase of the white corpuscles and by the presence of myelocytes, which are altogether absent in splenomegaly. In splenomegaly, on the other hand, not only is the number of red cells lowered but there is at the same time a reduction in the leucocyte count. The differentiation just given, simple though it be, is all-important, for a correct diagnosis between these two diseases is imperative before undertaking any surgical operation. Although splenectomy has been performed in leukemia, it is an operation which is so uniformly fatal that it cannot be recommended, for only five out of forty-three cases operated upon have recovered. The proper and, in fact, the only successful treatment in splenomegaly, however, is splenectomy and the mortality in suitable cases has now been lowered to 12.2 per cent.

Primary splenomegaly is a chronic disease occurring in youth, or young adult life, but not in infancy, and is characterized by an early enlargement of the spleen and a subsequent anemia. Its salient features may be summarized as follows: splenic enlargement which cannot be attributed to any known cause; absence of enlargement of the lymphatic glands; anemia of a type midway between secondary anemia and chlorosis; leucopenia (hypoleucocytosis) or, at most, no increase in the number of white blood corpuscles; an extremely long course, lasting for years; and a tendency to periodic hemor-

rhages especially from the gastro-intestinal tract. In the latter stages of this disease, cirrhosis of the liver, jaundice and ascites develop. The prognosis under splenectomy is good, provided the operation be performed in advance of the cirrhosis, for by the removal of the spleen and that only can the disease be arrested. Statistics compiled by Harris show 20 cases operated upon with 15 recoveries, or 75 per cent. cured. In a few cases, however, operation has been successful even after the appearance of the ascites.

My personal experience with the surgical treatment of splenomegaly is limited to one case, the report of which is herewith presented.

W. B., male, age 21 years, enjoyed perfect health until two years before my initial examination of him, which was made on July 13th, 1909. His family history was entirely negative to chronic disease of any kind. Aside from the zymotic diseases of childhood he had always been well and strong. For the past two years or more he had had pain in his loin, although his general health was good. In April of the current year he awoke to the fact that he was feeling tired much of the time and growing weak. In May his ankles, legs and abdomen became swollen. Under internal treatment given by Dr. L. H. Sterner, the lower extremities returned to their normal size and the fluid in the peritoneal cavity was greatly diminished. Dr. Sterner then discovered the large spleen. A urinalysis at this, and at several subsequent times, excluded renal disease. Mr. B.'s chief suffering was the sensation of weight and heaviness in the abdomen, particularly aggravated after eating, and which was accompanied by dyspnea. His appetite remained good throughout and his fecal evacuations were normal in every respect. He lost no weight whatever during the entire period of the development of the above conditions. Early last spring his color began to change for that of anemia, and in July he was decidedly blanched and presented the appearance of a very sick man. He did not have any abdominal pain, had never been jaundiced, and had never shown any enlargement of his lymphatic glands.

His left loin bulged markedly toward the side and front and the presence of a circumscribed growth of large size in the upper and left sections of his abdomen was evident to the eye. Palpation showed that this extended two fingers' breadth to the right of and below the umbilicus, and had a sharply defined

border, which possibly was notched. Its surface was smooth, was dull on percussion and this dulness was inseparable from that belonging to the spleen. The peritoneal cavity contained a sufficient amount of free ascitic fluid to give rise to a percussion wave.

Recognizing this tumor to be a greatly enlarged spleen, I ordered a blood examination made. This was done by Dr. S. W. Sappington with the following result: Hemaglobin, 40 per cent.; red cells, 1,900,000; color index, 1; white cells, 1,400. Differential count was normal and there were few red cell changes,—some paleness and slight distortion. No nucleated red cells were observed. Dr. Sappington thereupon announced a diagnosis of splenomegaly with an accompanying splenic anemia. I looked upon the case as a positively fatal one without surgical interference, and accordingly advised splenectomy as offering the only chance of recovery. This was finally agreed to by the patient and his parents, and the operation was performed on August 2, 1909. Under ether I made a longitudinal incision six inches long down through the left linea semilunaris, and added to this another incision at right angles, extending transversely as far as the outer border of the erector spinae muscle. The patient's blood was very pale and watery and innumerable small vessels required careful ligation. No adhesions were found within the abdominal cavity, and a moderate amount of peritoneal fluid was evacuated slowly. By means of clamps and ligatures I secured the pedicle of the spleen, tying the larger vessels individually with both silk and catgut, and then the stumps enmasse with chromic gut. I was now able to deliver the organ through the wound, and after dividing the lineo-renal ligament the spleen was severed from all peritoneal connections. An examination of the liver at this juncture showed it to be somewhat enlarged, but not perceptibly indurated. I found an accessory spleen near the hilum of the parent organ, in the gastro-splenic omentum; it was the size of an English walnut; I did not remove it. Careful attention to hemostasis and closure of the large parietal wound layer by layer without drainage completed the operation.

Pathological report by Dr. S. W. Sappington, pathologist to the Hahnemann Medical College and Hospital:

The specimen was received about an hour after its removal from the body. It appeared fairly normal in shape and bluish

red in color. The capsule was whitened and thickened in various areas. The organ weighed 3,080 grams, and measured 30 x 18 x 11 centimeters, (weight, 99 ounces; measurements, 12 x 7 x 4½ inches). It was firm and on section exhibited a red, granular appearance resembling somewhat the lung of croupous pneumonia. The absence of white bands or other evidence of connective tissue throughout the sectioned organ was noteworthy.

Microscopically, the changes were apparently confined to the endothelial cells and the blood mass. In some fields the spaces were distended to their utmost with red cells, normal except for their poor staining properties. These areas were in the minority. The greater number of fields showed uniformly a great proliferation of endothelial cells, filling the spaces of the pulp and also invading and separating the lymphocytes of the follicles. This invasion and separation of the follicle cells made the follicles appear larger by reason of their increased cell content, and, hence, closer together. But there did not appear to be any increase in the lymphocytic element of the follicle. The endothelial cells did not show phagocytosis to any degree as in the endothelial proliferation of typhoid. It is easy to understand the great enlargement of the spleen in the light of the tremendous proliferation of the endothelium and to a less extent the increase blood content. The pigment was inconspicuous, hence there was probably little breaking down of the blood elements. Connective tissue was scanty and played little part in the changes.

The patient was put back to bed in good condition, with an axillary temperature of 97°, pulse 120, respirations 32. Four hours later his mouth temperature was 103°, pulse 102, and respirations 32, a combination which indicated that he had thoroughly recovered from the shock of the operation. On the second day his temperature was 99.2-5°, pulse 88, and respirations 20, and he voided 42 ounces of urine. On the third day he passed 64 ounces of urine and begged for something to eat. He was given mutton broth, 6 ounces of junket, a soft boiled egg, orange juice and milk toast (during 24 hours).

His recovery progressed uninterruptedly and without a drawback; his wound healed perfectly; he sat up in bed the 15th day after the operation; on the 22d day he got out of bed, and he was discharged from the hospital on the 39th day.

Second blood examination made by Dr. Sappington on August 27, 1909, twenty-five days after splenectomy: Hemoglobin, 65 per cent.; red cells, 2,440,000; color index, 1.3; leucocytes, 4,500. Differential count normal and very few red cell changes. No nucleated red cells.

His anemic color had disappeared considerably. His physical condition at the present time, however, is not altogether encouraging. He continued to improve after leaving the hospital until he contracted a cold which was accompanied by severe pleuritic pains at the base of the left lung. Since then his appetite has waned, his anemic pallor has returned and he is again weak and miserable. Dr. Sterner reports to me that the hepatic enlargement has increased and the feet and legs swell if he is up and about for any length of time. I have recently suggested the internal administration of the extract of spleen and a reliable preparation of iron. (The one mentioned was ovoferrin).

While the ultimate result of this case hangs in the balance you will grant me the conclusion that the operation of splenectomy was justified here, and that my patient made a good and satisfactory recovery from it. Of course I cannot, and shall not, say that I have cured his anemia,—that would be presumptuous. But this much is assured: his splenectomy gave him the only chance he had.

DISCUSSION BY DR. LAIDLAW, NEW YORK.

In regard to operation for splenic disease, the situation reminds me somewhat of a young man who with great pride told Commodore Vanderbilt that he had just bought a railroad. The Commodore replied, "There is just one thing you want to make sure of in buying a railroad and that is that there is a railroad there." Now, in operating upon the spleen, the first thing to make sure of is that the spleen is there where you think it is. Tumors of the spleen or enlarged spleen are frequently confused with enlarged left kidney. I once made an autopsy in an insurance case where seven insurance physicians had diagnosed leukaemia on account of a large tumor in the left hypochondrium. The tumor proved to be a left kidney. The diagnosis of leukaemia was unwarranted because they made no examination of the blood and no man can diagnose leukaemia upon enlarged spleen alone even if it were a spleen. The count of the leucocytes is absolutely necessary to establish the diagnosis. However, these diagnosticians were open to

criticism on another account. The tumor was round, whereas the spleen presents a more or less sharp anterior border and in that anterior border are one or more notches which are readily palpable in the enlarged spleen. Then again, in enlarged left kidney, the area of the spleen can be mapped out by percussion and there is a distinct band of resonance between the splenic dulness and the dulness of a tumor of the left kidney. Another diagnostic point of differentiating enlarged spleens from left kidney was shown by the case of a child brought to the Flower Hospital several years ago. It is probable that several internes are now present who remember the case. The child was sent in with a diagnosis of enlarged spleen. In the left side of the abdomen in the left hypochondrium there was a rounded tumor which presented no sharp border and no notch. In this case, we made use of the anatomical fact that the descending colon passes over the left kidney but in front of the spleen. By emptying the bowel and injecting air with the aid of a syringe, you can always get a band of tympanitic resonance over a tumor belonging to the left kidney. On the other hand, if the tumor is the spleen it pushes the descending colon in front of it and there is no band of resonance across it as is the case with the kidney. Operation in this case proved the diagnosis correct that it was a tumor of the left kidney.

In discussing this subject, each speaker has laid stress on the obscurity which surrounds the recognition and treatment of diseases of the spleen. It is just such studies and operations as that described by Dr. Northrop that will throw light on this obscurity and bring into some order our rather chaotic notions of splenic disease. It will be the history of peritonitis and gall-stones over again. Whatever jealousy we physicians may feel about the encroachment of the surgeon upon conditions that we regard as medical, there is not the slightest doubt that the entrance of the surgeon into any medical field makes for accuracy of diagnosis and effectiveness of treatment.

So, while considerable obscurity exists about the diagnosis and treatment of enlarged spleen, we must look to the surgeon to give us, as he has with gall-stone and appendicitis, exact indications differentiating the cases which require operation from the cases which will recover on medical treatment. Not only is the surgeon interested in this question but also the general practitioner, for we general practitioners see these cases first and upon us lies the responsibility of recognizing at an early stage those conditions which are curable by early operation from those conditions which we can fairly treat medically.

It would not do to operate on every enlarged spleen, for many of them give the patient no trouble. On the one hand,

we must recognize that there is a form of enlarged spleen attended by a prolonged anaemia which is absolutely fatal if left to itself and in which early removal of the spleen is followed by cure. This is the spleen of Banti's disease. The best conception of Banti's disease is that of a chronic infection with its primary focus in the spleen. The objection to regarding Banti's disease as an infectious disease is that no bacterial or infective agent has been demonstrated either in the spleen or the other organs. However, it has been demonstrated that following the splenic enlargement there is a secondary fibrosis of the splenic vein extending to the liver and becoming a cirrhosis of the liver, attended by a chronic anaemia of six or seven years' duration and eventual death from exhaustion or gastric or intestinal haemorrhage. It is also known that early operation on several cases of what appeared to be an early stage of Banti's disease have been followed by perfect recovery. Here, then, is an enlarged spleen which requires early removal just as much as a tubercular focus or a malignant tumor. But how shall we recognize such an enlarged spleen? It must be admitted that the early recognition of such cases has not been worked out with sufficient precision to afford exact indications. The symptom of anaemia might well be the deciding symptom; for, whether the enlarged spleen were a Banti's disease or a malignant tumor, as is possibly the case in this instance, early excision of the spleen would be equally indicated.

On the other hand, there is one form of enlarged spleen which is often attended by anaemia in which removal of the spleen is nearly always fatal to the patient. It is the enlarged spleen of leukaemia. That much, certainly, the surgeons have taught us that cases of leukaemia in which the spleen was excised, practically all die. Between the leukaemic spleen which should not be removed and the spleen of Banti's disease which should be removed there range a variety of enlarged spleens in which the question of removal must rest upon the judgment of the attending physician. With the light that the surgeons are beginning to throw upon the question of early removal of the spleen, it would probably be the wisest plan for the physician attending a patient with enlarged spleen who is distinctly failing in health, to call in counsel and seriously consider the advisability of operative removal.

THE SERUM DIAGNOSIS OF SYPHILIS: A STUDY OF 176 CASES.

BY

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(Read before the Clinico-Pathological Society, Nov., 1909.)

IN its adaptation of the Bordet Gengou phenomenon of complement deviation, the Wassermann reaction, in a comparatively short time, has become a well established test in the sero-diagnosis of syphilis. Since its introduction, however, owing to the extreme delicacy of the reaction, and the cumbersome and complicated nature of the technic, an enormous amount of critical investigation has been done, both as to simplifying the technic and establishing its specificity.

The foundation of this test depends upon the fact that an absorption or deviation of complement takes place when an antibody and its antigen are brought together (first observed by Bordet and Gengou in 1901 during their studies of bacteriolysis) and the reaction is demonstrable on the principle of hemolysis. This system, which is used as an indicator, is simply a dissolution of red blood cells in suspension (*antigen*)* and is dependent on the interaction of two substances: *complement* and *amboceptor*. The former is present in all sera, and is thermolabile, *i. e.*, destroyed when heated to 56° C. for one hour. The latter, known as the hemolytic amboceptor or antibody results from the reaction of an injected animal after several inoculations of blood cells of another species and is specific only to blood cells of that species. It is thermostable, *i. e.*, resists heating to 56° C. for one hour. Fig. 1 shows the principle of hemolysis, according to the Ehrlich school of reasoning, in which the solvent effect of the complement begins only after the intermediate substance, the immune or antibody, has united with its antigen. If now anything, having the power to unite with antigen to deviate complement, is present in a mixture before sensitization occurs, it is evident that it must therefore prevent hemolysis; as is shown in Fig. 2, in which the union of a syphilitic antibody with its antigen, so completely absorbs complement as to inhibit any disintegration of blood cells, sensitized with specific antibody. It is likewise obvious from this that any complete inhibition or partial

*Any substance, toxic or otherwise, which when injected into animals is capable of producing antibodies is known as antigen.

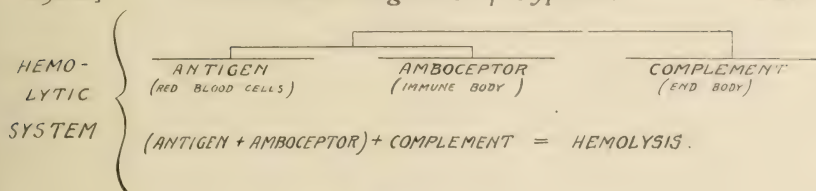


Fig. 1.

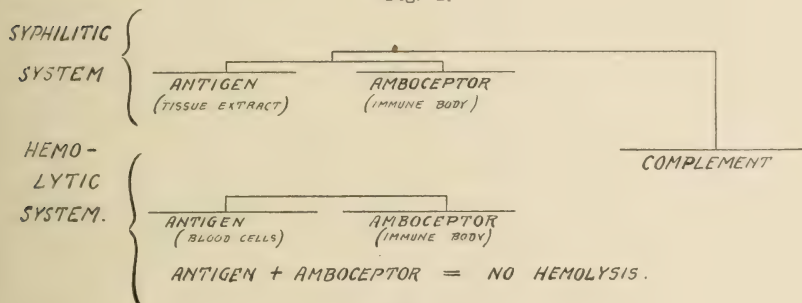


Fig. 2.

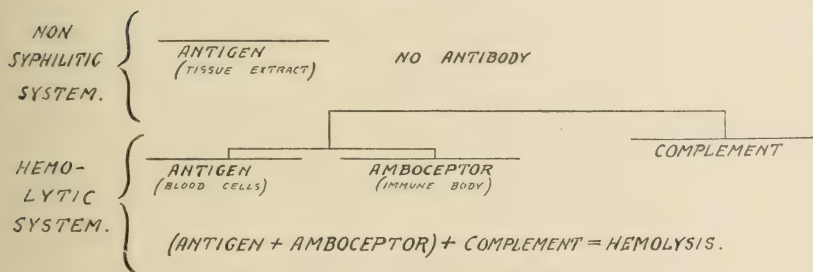


Fig. 3.

inhibition of hemolysis is dependent on the ability of the anti-body-antigen compound to absorb all or part of complement, depending as the quantity of the syphilitic antibody present in the serum is great or small. A negative reaction is shown in Fig. 3.

Applying this system Wassermann, Neisser and Bruck, using a saline emulsion of syphilitic liver, as antigen, demonstrated in the sera of syphilitic apes a specific material, which they claimed was a syphilitic antibody. Subsequent work in the nature of antigens, other than extracts of syphilitic organs, has, however, destroyed this view. Levaditi and Marie and afterwards others, using extracts of normal livers obtained almost as satisfactory results as when using syphilitic organs, and so claimed that the reaction was not due to a true specific anti-body, but to the presence of some other substance in the patient's serum which, in the presence of liver extracts, produced an anti-complementary effect. Then extracts of various other

organs were used, such as human and animal heart, liver, etc., with equally reliable results, and it was soon shown that the active substances were soluble in alcohol and ether. As this extraction indicated the substances to be of a lipoid nature, accordingly various other members of this group were used, with variable results, such as lecithin, sodium oleate, cholesterine, and various others. Most workers, however, seem to agree that extracts of organs give the most consistent results, as they contain, besides the lipoids, various protein bodies which are supposed to be concerned in the reaction.

Of the many assumptions as to the nature of this phenomenon, none has as yet been fully accepted. Porges, Solomon, Sachs and Noguchi, favor the absorption theory of Bordet, that of a physico-chemical phenomena. But whatever explanation of the reaction one is inclined to favor, at present, the true nature of the substance or substances concerned in it are not clearly known. Because of the complexity of the Wassermann reaction, and on the assumption that it was the result of some precipitation, various investigators devised methods tending to replace the complement fixation reaction. Among these may be mentioned the Porges, Meiers, and those of Fornet, Sachs, Klausner and Noguchi. Schurman also devised an ingenious color reaction, but all seem to be less accurate and not specific.

In his original method Wassermann used a hemolytic system of: a 5 per cent. suspension of sheep corpuscles, sensitized with 0.1 c.c. amboceptor and 0.1 c.c. of a 50 per cent. complement in saline, and saline or alcoholic antigen using about 19 controls. About the time that we began to study the reaction, various modifications of the Wassermann technic were devised with a view to simplification. Bauer took advantage of the fact that there existed, in most human sera, a natural hemolytic amboceptor to foreign blood corpuscles, and accordingly did away with the use of the rabbit's serum. The objection to this method lies in the fact that the natural amboceptor is only present, in sufficient quantity, in about 40 per cent. of sera, and in some of those often of such wide variations of degree, that to be accurately performed a standardization would necessarily further complicate the already cumbersome technic. This objection would hold essentially to the method of Hecht and later Fleming, who went a step further and used both the natural hemolytic amboceptor and complement con-

tained in human sera, using, of course, fairly large quantities of sera. With a view to removing the disturbing influence of native amboceptor Tschernogubow then claimed that he had successfully employed an anti-human amboceptor, which could be reactivated by complement already contained in fresh human sera, but made no mention of the source of the amboceptor. Very shortly after Noguchi using the same principle as Wassermann advised the use of an anti-human system instead of an anti-sheep system, still however using guinea pig complement. Thus he claimed to avoid the disturbing factor of any natural amboceptor present in human sera, capable of being reactivated by guinea pig complement; a defect inherent to the Wassermann method, and any other using foreign blood corpuscles,—and that each of the factors employed in the test were separable and titrable, and finally that each of the reagents used could be placed on filter paper, dried and standardized, and so made more stable and more easily handled. As it was essentially this method used in this work, for the sake of clarity, it might be advisable to describe in detail the technic and reagents used.

The following reagents are required:

1. *Antigen.* We have used both saline and alcoholic extracts of syphilitic livers and of normal organs and have found, as claimed, that normal organs were just as satisfactory as syphilitic ones. It is prepared by grinding the organ, in a mortar, to a thick paste, squeezing through cheese cloth and extracting with ten volumes of absolute alcohol, for one week at 37° C., it is then filtered, rapidly evaporated and again taken up in alcohol and filtered and evaporated. The resulting extract is then dissolved in ether, fractioned in acetone and taken up in alcohol and ether and impregnated on paper. Being first tested against syphilitic and normal sera.

2. *Anti-human immune hemolytic amboceptor.* This is prepared by injecting rabbits intraperitoneally with increasing doses, up to 20 c.c., every five or six days, with human blood corpuscles, that have been carefully washed. Care must be taken in the latter doses, owing to the condition of anaphylaxis developing in the animal. The resulting titre must be stronger than 0.01 c.c. for complete hemolysis in the presence of 0.04 c.c. complement in 30 minutes. To test the strength of the serum a sufficient quantity of blood may be withdrawn

from the marginal vein of the animal's ear for such attenuation. We now use a titre of 0.0015 c.c. to 0.0025 c.c.

3. *Complement.* Fresh guinea pig serum, very unstable, cannot be used on paper and must not be used after 36-48 hours. Quantity used 0.04 c.c.

4. *Suspension of human corpuscles.* Prepared by mixing, in the proportion of one drop of washed blood corpuscles of a normal individual to 4 c.c., of saline solution 0.85. In nearly all of our tests I have used my own corpuscles in order to make this factor as nearly constant as possible.

5. *Patient's serum.* Collected in a Wright capsule and sealed. May be kept for several days. The blood is allowed to clot or is centrifuged and the clear serum used. About 0.025 c.c. to 0.04 c.c.

6. *Sera of a normal and a known leutic individual* are collected in the same way and used in the same quantity, in the negative and positive control respectively.

THE TEST.

To make the test, 8 clean test tubes (10 x 100 m.m.) divided into sets of two, are used. Into each tube of the first set is placed about 0.025 c.c. (one drop from a capillary pipette) of the patient's serum. If this reacts negatively 0.04 c.c. is used. Into each of the second two (positive control) is placed the same quantity of the serum of a known syphilitic. And into each of the third pair (negative control) the same quantity of the serum of a normal individual. The fourth set receives no sera. Now, to each of the 8 tubes is added 1 c.c. of suspension of red blood corpuscles and 0.04 c.c. fresh guinea pig serum. Finally one tube of each set then receives one unit of antigen. The tubes are then well shaken, and incubated for one hour at 37° C., being shaken frequently. Two units of hemolytic amboceptor are then added, the tubes shaken, and again incubated for two hours, or until the third and fourth set show complete hemolysis in both tubes, when the results are read off, and the tubes placed in the ice chest over night; to allow for sedimentation of corpuscles in the non-hemolysed tubes, and the results compared with the previous reading. Our protocol would then read:

P R O T O C O L

RESULTS									
SYPHILITIC +				NON SYPHILITIC -					
HEMOLYSIS				HEMOLYSIS					
NO HEMOLYSIS				"					
HEMOLYSIS				"					
NO HEMOLYSIS				NO HEMOLYSIS					
HEMOLYSIS				HEMOLYSIS					
"				"					
"				"					
"				"					
INCUBATE ONE TO TWO HOURS AT 37° CENT.									
				HEMOLYTIC AMBOCEPTOR					
.005				.005					
.005				.005					
.005				.005					
.005				.005					
INCUBATE ONE HOUR AT 37° CENT									
ANTIGEN				COMPLEMENT					
1unit				1cc. .04					
1unit				1cc. .04					
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A negative reaction is indicated by complete hemolysis in both tubes of the first set irrespective of the presence of the antigen, while a positive reaction is shown by complete or partial inhibition of hemolysis in the tube containing the antigen, and complete hemolysis in the tube without antigen. In all cases it is necessary to note that hemolysis has occurred in all tubes without antigen, irrespective of the nature of the sera contained. All tubes with antigen will undergo complete hemolysis more slowly than those without, but complete hemolysis must occur in both tubes of the third and fourth set before the final reaction is read.

It is easy to see that extreme accuracy is necessary in using the reagents in uniform quantities to obtain satisfactory and constant results, and while it is obvious why this applies to complement, that any excess or deficiency of amboceptor or antigen may just as easily disturb the value of the test is equally true. We used amboceptor in three ways, in this work, in liquid and powdered form, and impregnated on paper. In about the first 25 per cent. of our cases, we used liquid antigen (saline and alcoholic emulsions of syphilitic organs) and in the remaining alcoholic extractions of normal organs impregnated on paper, in which form it retained its activity about four weeks. We were able to use complement only in the fresh serum, all attempts at preserving, dessicating, and impregnating on paper failing. All sera were used active, because inactivation reduces the antibody content about 75 per cent., thus necessitating the use of more serum. Where 0.025 c.c. reacted negatively 0.04 c.c. was used.

PERSONAL OBSERVATIONS.

The data on which our observations were made were obtained from the sera of some 200 cases. It might be of interest to add that all of these sera, with a few exceptions, were examined with no previous knowledge of their origin, or the history of the cases from which they were obtained, and also that about 75 of the sera were examined in duplicate and independently by Dr. Shöbel, in which our results agreed satisfactorily, in strongly positive and negative results and only varied in those giving doubtful reactions. In classifying the cases we were particularly handicapped, as is usual in dispensary statistics, in not being able, always, to verify tentative

diagnoses by clinical developments and so making a large part of our examinations useless for ultimate comparison.

Of 20 cases of positive clinical chancre, in which the initial lesion had been present at least 12 days, 19 reacted positively, and one doubtful or negative. All reactions before this time were indefinite and not conducive to well defined results. However, from this time until the rash appeared, the antibody content rapidly increased.

The most satisfactory findings in this study were those of secondary manifest syphilis, of which 24 cases were examined—23 of these gave strongly or fairly strong positive reactions and one doubtful, this latter serum which was examined at three different intervals with the same result, was a case of seven months' duration and had been very thoroughly treated.

Twelve cases of manifest tertiary syphilis were examined, of which 8 reacted positive, 3 doubtful and 1 negative. The more manifest, as in other stages, as a rule gave the more clearly defined findings, which is just as we would expect, if the antibody is a true concomitant of the disease.

Of 38 cases of suspected syphilis, 17 reacted positively, 4 doubtful and 17 negative. A majority of these undoubtedly later showed a true chancroidal manifestation, while in others syphilis as an etiological factor was only suspected.

Of other venereal diseases—specimens of some 36 cases of chancroid were examined showing 30 negative, 5 doubtful, and 1 positive reaction. The latter case was an undoubted one of chancroid, showed no signs of manifest lues and denied all previous history, his serum showed the same results at two examinations (one by myself and one by Dr. Shöbel). Four cases of herpes, were negative in two and positive in two, both of which latter proved to be old cases of secondary lues. Two cases each of gonorrhœa and orchitis gave negative results in three and one (of orchitis) a doubtful result (history of "chancre 15 years ago").

About 38 specimens of sera, of persons from which no syphilitic history could be elicited, were examined. These included 18 healthy persons and those with the following diseases: Carcinoma, 5; sarcoma, 2; typhoid fever, 3; heart lesions, 2; hemiplegia, 2; and one each of angina pectoris, catarrhal jaundice, arterio sclerosis, empyema, delirium tremens and Rigg's disease. Of these, two gave positive results—a case of typhoid fever, examined twice, and which gave no his-

tory, and the case of catarrhal jaundice, examined four times, always with very strongly positive results, yet denying all history of infection. This latter is interesting in view of the claim that the lipoids are the active principle of the antigen and than an excess of lipoids are elaborated during the pathological activity of syphilis.

The interpretation of the results are at times extremely puzzling (especially when no history of the case is known) and, while several contradictory findings were obtained, such discrepancies are possible, when the complexity and delicacy of the test and the unstability of the reagents employed, are appreciated.

Accordingly, as in other biological tests of even simpler technic and more thorough development, doubtful results, at times, must be admitted, especially in earlier studies. There can be little doubt also that only after a thorough training in the intricacies of sero-diagnosis, can satisfactory interpretations be made. It is for this reason that we have confined ourselves, for the most part, to the study of the findings in the more active stages of the disease, those in which positive clinical diagnoses could corroborate our findings.

The ultimate value of this test will undoubtedly depend, for the most part, on its findings in tertiary and parasyphilitic affections and I mean, if possible, to pay attention to this phase and shall hope to report in the future on a more extensive study of this important subject.

[It is my pleasant duty to express my indebtedness to Dr. S. W. Sappington for the original suggestion, and subsequent assistance that made this study possible; also to Dr. Otto Shöbel, of Glenolden, for the examinations above referred to, and much other valuable aid. And to Dr. W. C. Hunsicker for verifying the above results, and for his courtesy in supplying material from private and dispensary cases; to Dr. J. G. Wurtz for the charts and drawings, and especially to Mr. G. C. Hopp, of the senior class, for his interest in collecting sera and data.]

PREVENTIVE MEDICINE.

BY FRANKLIN F. MASSEY, M. D., WOMELSDORF, PA.

THE presentation of this paper is not so much for the purpose of evidencing the "profound" knowledge of the author, nor is it to tell of some startling discovery. The facts are not new, in truth, the ideas of us all are but modifications of impressions received by association with others, for it has been rightly said, "I am a part of all that I have met." But the idea of the essay is to create, if possible, some discussion.

For centuries upon centuries mankind has been compelled to endure more or less physical discomfiture in one manner or another by sickness or accident. Much study, practical knowledge and experiment have resulted in most miraculous knowledge of the management of disease and in the application of drugs—the medical world has been revolutionized,—but is not this an artificial method of benefitting mankind, waiting until he is sick to attend to him? What would we say of the government which waited until a ship is ready to sink before testing it? Or the railway company that failed to properly take care of its rolling stock *before* a horrible wreck occurs? But our human machine, oh, that is another thing! Nature surely has not intended that the human race should be compelled to undergo sickness unless the person in question has transgressed her laws. Sickness is a form of sin—it is the result of sinning against Nature.

Some efforts are being made by health boards and officers and health organizations, particularly the American Health League, to better study the cause and best methods of preventing disease. But so far, the author claims that the great mass of medical doctors have not given due attention to the prevention of disease in a *natural* way, except in a very general way. Medical men, it is true, have done much to prevent the *spread* of certain contagious and infectious diseases, but not much has been accomplished in a way to materially lessen the liability of contracting the first cases. Typhoid fever, for instance. We spend annually millions of dollars in sickness, loss of time and cash to purify water, but why purify water? Why not get it naturally pure from the start, instead of endeavoring to clarify it after it has become filthy?

Our municipal and State Boards of Health have done much to exterminate disease *after* it has appeared, by use of anti-septics and disinfectants. Certain municipalities have health inspectors, some of whom are medical men, who examine school children, factory hands, etc., but little is being actually accomplished in prevention of disease.

The physician has given much of his time to study wonderful theories, and is much taken up with modern discoveries, often overlooking many natural conditions.

Doctors are usually called in during sickness, and more often than not, after numerous "home remedies" have been administered with little or no avail. Now, if the medical man is to do his full duty, he will try to train his clientele to patronize him in health. But, on the other hand, he must study up more scientifically hygiene and dietetics if he will be of value, for, in my opinion, the advice of so-called grandmothers is of much more service than that of the average doctor, when it comes to certain hygienic and dietetic matters.

The future of the physician should be the practice of *preventive* "medicine" so far as is possible. I firmly believe that if the body is in a good healthy condition few if any diseases will take hold upon us. It is that belief and the working upon natural principles that have given the Physical Culturists and Osteopaths such wonderful results in their respective forms of practice. You will say, "Why we are trying to exterminate disease." So you are in some ways, but while you bend your energies one way you neglect another problem, for instance, we are trying to fight the "White Plague," or consumption, and are forgetful of or ignore the fact that we are already or soon will be confronted by a new disease from the dust of automobiles. It is a well-known fact that a road may be clear and inviting but a moment before, while a moment after a merry party of automobilers go by, a person cannot see ten feet behind the machine. Houses cannot possibly be kept fairly free of dust, even by daily sweeping and dusting. Carpets, curtains and furniture are simply ruined, to say nothing of clothes in closets and wardrobes, dishes and eating and cooking utensils. The dust raised by the automobiles is a combination of refuse from animals, grease, sputum from people—this sputum often coming from catarrhal, consumptive and syphilitic subjects, and this dust we are compelled to inhale, not in small quantities, but in "good" old-

fashioned, allopathic doses, often a hundred times a day. And what are we doing to prevent it?

For years we have had compulsory vaccination laws for prevention and amelioration of small pox, but is small pox more dangerous or more frequent than such diseases as typhoid fever, insanity, great pox (syphilis), gonorrhœa and crimes? (Crimes are often but the outward signs of inward disease). I tell you, brother physicians, syphilis alone is causing in one month, directly or indirectly, more sickness, disaster and death, than small pox will in a year; and yet, we are taking no *active* measures to prevent its spread.

Gonorrhœa is doing its work of destruction—three-fourths or more of women's diseases being caused by this disease. Take our institutions for the blind, where thousands of poor souls live, over ninety (90) per cent. of those blind from birth are so because of gonorrhœa in the parent. And we sit calmly and read *materia medica* and therapeutics.

Look at the appalling increase of the number of the insane. Our institutions are overcrowded, homes ruined and hundreds murdered, and we complacently study bacteriology.

Consider typhoid fever, which we claim to have controlled, breaking out in unexpected quarters, and we wisely say, "Filter and boil your water," while Mother Earth has abundance of pure, uncontaminated water awaiting use.

Look at the numerous other ailments caused by lack of knowledge and application of hygienic measures. Gentlemen, if we are going to have a healthy nation, we must concentrate our energies and teach our families to get (and pay for) advice before sickness or death appears.

Before discussing how to proceed, let us consider a few of these diseases and their causes:

Typhoid fever need not be discussed more than it has been already. Insanity, syphilis and gonorrhœa are unnatural diseases, and are, therefore, caused by unnatural conditions. We are eating unnaturally, working unnaturally, sleeping unnaturally, marrying unnaturally, clothing unnaturally and are having unnatural offspring, and it is time to call a halt, and nobody is better able than the physician to hasten the stopping of present day ideas and practices. Society is composed of individuals, and it is wonderful what influence just one person has upon it if he or she will but exert themselves a little.

In the matter of eating, the quickest made ready, most highly

flavored food is generally desired, while a plain vegetable, fruit or nut diet would be more nourishing and beneficial. Often a change of diet alone will relieve and even obviate painful menstruation without the aid of a drug, but how many physicians take cognizance of the fact? Many do not *really* know what to advise to eat. No, they would rather give medicine when the trouble is here than to study what may prevent.

In reference to sleep, it need not be told you that we are turning night into day and judging by the number of weak-eyed children we are turning slowly but surely day into night. Night was meant to sleep in and if we will misuse it both ourselves and posterity will pay the forfeit.

In regards to work, let it be said that work must be done and factory laws are doing something to improve the conditions under which this labor must be accomplished, but there is much room for betterment. Considering the clothing question, let me say that generally speaking we are improperly clothed from infancy to old age. Why burden a tot twenty inches long with a dress and petticoat large enough and heavy enough for three such infants? (and thus making millionaires of the dry goods men). Is it because we would try to deceive ourselves into thinking that our babies are larger, or are we trying to hide our shame in a mass of skirts. As the child grows, if it be a girl, it is dressed in starched goods, Ferris waists, corsets, high heeled shoes and other unhealthy things. Boys are more sensibly dressed. Clothing for all ages, sexes and conditions should be as simple and uncomplicated as possible. One reason a boy is healthier than a girl is that he is unhampered by unnecessary clothing and can engage in sports with not only pleasure, but ease. In the summer time, when he wants to take a swim, he doffs his emblems of "civilization" and jumps into the delicious waters of the lake, creek or river, and on coming out sits on the ground, his entire surface of skin being bathed by the sun and open air. Oh, that society would awaken to the fact that it would be just as beneficial to our growing girls to get this same air, sun and water bath as for our boys. Our girls would be less nervous and of more sturdy nature, and could be given places as private as a bath room if we would prepare them. We would not think of preventing the sun's rays from immersing the leaves of vegetation, and yet our skin, which performs much of the same function, is denied it.

Mentioning personal hygiene, and dietetics, let me say that the world is full of syphilis, gonorrhœa, rape, masturbation, sodomy, bastardy, divorce and loveless marriages, much of which could be obviated or even obliterated if we begin early enough and sincerely enough to give honest teaching to our children. This teaching should be started as early as is possible. Do I hear the cry of "Immodesty"? Let me say that in this age and time I have not seen many modest persons, but I have seen hypocrites.

Honorable Judge Benjamin Lindsey, says that the majority of girls begin prostitution around twelve years and are confirmed by the age of sixteen. There is something wrong, when in the State of Pennsylvania alone last year there were born something over four thousand *acknowledged* bastards. Who is to blame for these conditions? I claim that in a great measure you and I are. If we paid more attention to personal hygiene and dietetics, not in broad generalities, but in detail, and as our families grow up under our care, give the needed *moral* and *physical* advice, here a little, there a little, convincing our clientele that our services are of value, we would be in pocket, they enjoy health and the world would be purer in body, mind, and soul.

But are we, as physicians, possessed of the proper knowledge? How many doctors know that a mother's milk is not in condition until *after* the baby tells them? How many pale and poorly developed boys and girls are to be seen walking around when inexpensive food and clothing, with proper exercise, would right them? How many boys and girls fall into immoral practices because of lack of proper teaching *before* they obtain the knowledge? The child obtains this knowledge as soon as it enters school, but the poor, deluded parents will not believe it until a calamity befalls them. This applies to rich and poor alike.

For years past our government has spent millions for the purpose of studying pigs, cows, horses, wheat, corn, rye, alfalfa, etc., but until very recently no active steps have been taken for the study of man. Of late, however, the American Health League, of which the writer is a proud representative, has taken steps to do for men what we have done for our barnyard and forest animals. This league has many prominent men as members, including Judge Benj. Lindsey, Rev. Lyman Abbott, Thos. A. Edison, Archbishop Ireland and others. The

Ladies' Home Journal some months ago, and again in its most recent edition, calls attention forcibly to some facts mentioned in this essay, but the medical world is doing little to actually improve social conditions. To better these conditions we must do individual work, for the very fact that every man is a law unto himself, proves that what is beneficial to one is not good for another.

Gentlemen, can you and I, as representatives of Doctors of Medicine, stand idly by and let newspapers and journals take the lead of thought for the people without let, hindrance, help or advice from us? No, let *us* do the leading, let *us* do the advising both in public and private life and then will preventive medicine be an established fact and the world all the better for it.

A PERNICIOUS BILL AND A JUST ONE.

BY

T. H. CARMICHAEL, M. D., PHILADELPHIA.

Chairman of the Committee on Pharmacopœia of the American Institute of Homœopathy.

A BILL introduced into Congress by Representative Coudrey, of Missouri, and now before the Interstate and Foreign Commerce Committee is one of those ill-advised measures that should be killed in committee. It proposes in its first section, "That the United States Government should edit and publish the United States Pharmacopœia or National Formulary, and have a complete test for purity and strength of all drugs and chemicals whether generally used or not, in the United States Pharmacopœia; that for the benefit of mankind or animals there shall be only one standard of drugs and chemicals, which shall conform in strength, quality or purity to the standard prescribed or indicated for a drug of the same name recognized in the United States Pharmacopœia or National Formulary; that it shall be made a criminal act if every drug manufactured or sold for the benefit of mankind or animals is not standardized United States Pharmacopœia; that it be also made a criminal act for any druggist or manufacturer of proprietary or patent medicines if they do not employ standardized United States

Pharmacopœia drugs or chemicals in compounding their formulæ and to so state on the label."

Such a bill is objectionable on general principles. The medical profession does not desire to be run by the Government at Washington. There is a growing tendency through specious pleas "that for the benefit of mankind or animals" the practice of medicine should be regulated by politicians of cities, States and (in this bill) by the National Government. It is time that physicians should do their best to halt such legislation.

In this particular bill some one unacquainted with the subject would further establish by law a standard which is acknowledged to be incomplete. It was found necessary to attach the National Formulary to it in order to make a semblance of a standard in the Food and Drugs Act. However, both together fall far short of a complete standard. One of the most serious omissions from these works is provision for the preparation of tinctures from fresh plants which shall be of an uniform drug strength at all times and seasons—whether wet or dry. Under *Herbarum Recentium* the U. S. P. gives one formula which would make fresh plant tinctures of varying strengths according to the character of the plant and the season in which it was gathered. There is only one work in the United States which provides for the proper preparation of fresh plant tinctures of an uniform drug (one-tenth) strength irrespective of the seasons. This work is the *Homœopathic Pharmacopœia* of the United States and should be added to the existing works mentioned in the Pure Food Law in order that a complete standard may exist. When it is remembered that there are about three hundred fresh plant tinctures in use by thousands of physicians some of whom are to be found in all schools of medicine the importance of standardizing this class of preparations is at once apparent.

Mr. Coudrey's proposed amendment to the Pure Food and Drug Act is therefore (to say the least) premature as it would need to include the *Homœopathic Pharmacopœia* of the United States with the *United States Pharmacopœia* and *National Formulary* to approach a perfect standard before it should be offered to the Government to edit and publish. If this were done, there might be no objection to have the U. S. Government represented on the Board of Revision of all of these works which it could then endorse. This would be different from hav-

ing the U. S. Government edit and publish the standard for the medical profession.

In the meanwhile there is another bill known as H. R. 12370, which all physicians should endorse and about which every homœopathist should at once write to his Representative urging his influence for its favorable passage.

This bill is also an amendment to the Pure Food and Drug Act and was introduced by Hon. John Dalzell, of Pennsylvania, on December 9th. It is now before the Interstate and Foreign Commerce Committee. It proposes to add to the words United States Pharmacopœia or National Formulary the words "or in the Homœopathic Pharmacopœia of the United States" wherever they appear in the bill so that the Pure Food Law may have a standard that is complete in that it will then include the preparation of tinctures made from fresh plants.

THE SYMPTOMATOLOGY AND FUNCTIONS OF THE OPTIC THALAMUS.—Present investigations of the optic thalamus seem to indicate that its function is for the reception and distribution of sensory impressions, and that it forms part of the primary sensory centers for vision, hearing, smell, equilibrium, and deep and superficial sensibility. Lesions of the optic thalamus occasion three kinds of symptoms. These are, general symptoms; those due to pressure on adjacent structures; and symptoms essential to the injury of the thalamus itself. Pressure on, or involvement of, adjacent structures may cause a hemiplegia which mostly passes away in a shorter length of time than usual. Associated with the hemiplegia there may be hemianæsthesia and hemiataxia. Involvement of the corpora quadrigemina leads to anisocoria and ocular paralysis. Hemianopsia, and choreic, athetoid, and forced movements of the body have been observed. The essential symptoms are, pain, anæsthesia, and perhaps some hemianopsia. The pain is a sort of burning discomfort on the paralyzed side and is much more distressing than other kinds of pain. The author has not observed paralysis of emotional expression, explosive laughter or crying, and choreic or athetoid movements in any of his cases. According to the researches of Sachs the thalamic syndrome is characterized by slight persistent hemianæsthesia; slight and rapidly regressive hemiplegia which usually is without contracture; slight hemiataxia; more or less complete astereognosis; persistent, severe, paroxysmal pains on the paralyzed side; and by choreic and athetoid movements of the limbs on the paralyzed side. The author believes that the thalamus is not an organ which controls emotional expression, and that lesions confined to this structure do not lead to the development of such disturbances of emotional expression as forced laughing and crying. Reports of three cases are appended.—Charles L. Dana, *Jour. of the A. M.* A., December 18, 1909, p. 2047.

EDITORIAL

THE SERUM DIAGNOSIS OF SYPHILIS AND ITS VALUE IN PRACTICAL MEDICINE.

CLINICIANS have been endeavoring for many years to find an accurate and reliable method of establishing or confirming a diagnosis of syphilis in doubtful cases. The unreliability of the statements made by many patients suffering from this disease has become classical, and patients frequently deny that they have had a syphilitic infection even when the statement is prejudicial to their own interests.

Then, too, it must be remembered that there are cases of syphilis in which the primary chancre is so situated as to be invisible or is so trivial in its manifestations that the patient does not notice its presence. The secondary symptoms, too, are extremely mild in some instances and may be considered by the patient or his physician as a simple erythema or heat rash.

On account of these facts, patients who are entirely honest frequently make statements which are misleading to the physician and prevent the prompt institution of the proper therapeutic procedures.

Syphilis, too, so frequently attacks the central nervous system, and so frequently simulates grave and fatal maladies, such as carcinoma, epithelioma, etc., that the question of differential diagnosis is so important that it actually involves the patient's life itself.

The importance, therefore, of a positive method of detecting a syphilitic taint in an individual can scarcely be over-estimated.

During recent years numerous experimenters have been endeavoring to arrive at a diagnostic test through the medium of the blood serum. Wasserman was the first to propose a test which seemed to offer a solution for this problem, and, later, Noguchi has modified the original Wasserman test in a way that considerably increases the accuracy of the procedure.

The principle applied in the Wasserman reaction depends

upon a phenomenon originally discovered by Bordet and Gengou in 1901. Studies in immunity have shown that when bacteria or other toxic substances (antigens) are introduced into the blood of a human being or of an animal, substances are formed which are destructive to the bacteria or toxic material introduced, and hence they have been termed "antibodies."

It was later proven that the antibody was incapable of destroying the foreign substances introduced in the experiment unless there was present in the blood a third or completing substance known as the "complement."

There are therefore three factors involved in this process: (1) A bacteria or cell to be destroyed or a poison to be neutralized (antigens); (2) a substance capable of doing this (the antibody); and (3) a completing substance without which the reaction cannot take place (complement).

Bordet and Gengou conceived the idea of demonstrating in a test-tube the presence of antibodies by attempting to fit on to them the corresponding antigen. In order to do this complement is absolutely necessary.

Supposing, then, we were to take blood serum from a patient suffering from typhoid fever. This serum would, of course, contain the typhoid antibodies. If we introduce the serum containing the typhoid antibodies into a test-tube containing some of the typhoid bacilli, and add a proper amount of complement, a reaction will take place; the bacilli, the antibodies and the complement unite to form a stable triad; in other words, the typhoid antigen is bound to the available complement by the antibodies.

If we now introduced into the same test-tube a mixture containing sheep's corpuscles and their appropriate antibodies destruction of the corpuscles will not take place for, in order that this may occur, complement is necessary. As before stated, the available complement has already been fixed by the typhoid antigen and antibody. If the serum used had not contained typhoid antibodies the complement would not have been bound to the typhoid antigen, but would have been left free to combine with the sheep corpuscles and their corresponding antibody, and would have produced a solution of the corpuscles.

The test consists, therefore, of proving the presence or absence of certain antibodies by making use of the phenomenon of bound or unbound complement, employing the blood corpuscles of sheep or of man as an indicator.

Proceeding on this basis, Wasserman made use of the extract of the liver of a syphilitic infant, it being found that this organ contained the greatest number of the *spirochaeta pallida*. This product is the syphilitic antigen. The specimen of blood to be examined is taken from the suspected individual, allowed to coagulate and the serum drawn off. The serum is then mixed in a test-tube with the syphilitic antigen, and a proper quantity of complement is added. If the suspected serum contains syphilitic antibodies, which only exist in the blood of persons who have been infected with syphilis, a union of the antigen, antibodies and complement will occur. Red corpuscles from the sheep, together with their antibody, are now added, and if no solution of the red corpuscles occurs the test is said to be "positive." If solution of the red corpuscles of the sheep does occur it shows that the syphilitic antigen could not take up the complement because the syphilitic antibodies were lacking; thus indicating that the serum to be tested was taken from a non-syphilitic individual.

Generally speaking, the Noguchi test is similar to the Wasserman test except that the human blood corpuscles are used as an indicator instead of the corpuscles of the sheep. This is found to have certain advantages and renders the test more delicate than the Wasserman test.

Time does not admit of our going into the technical details of these tests which are long and complicated.* It is stated by most experimenters that from two to three months of constant training are necessary before a physician is capable of carrying out the test with any degree of accuracy. It is, therefore, evident that it is not a procedure which comes within the scope of the general practitioner, but rather must be left to the trained laboratory worker. This fact, while somewhat of a drawback to the frequent application of the test, is not a sufficient objection to cause it to be considered out of the range of practicability, for it is worth while in doubtful cases to exert every possible effort in order to settle a point of so great importance both to the diagnostician and to the therapist.

The point that is of especial interest to the practical physician is to know to what extent the Wasserman and Noguchi tests may be considered reliable. The opinion of most workers seems to be that the Wasserman test is not sufficiently sensi-

*See article by Raymond H. Leopold, M. D., in this issue of the *HAHNEMANNIAN MONTHLY*.

tive and that the Noguchi test is too sensitive. More accurately stated, it has been found that the Wasserman test fails in about eight per cent. of cases known to be syphilitic, while the Noguchi test, while giving a positive reaction in ninety-nine per cent. of all syphilitic cases, will also give a positive reaction in about seven per cent. of normal cases. A fairly marked Wasserman reaction ninety-nine times out of a hundred means syphilis, and a negative Noguchi the same number of times means no syphilis. The conclusion to be reached, therefore, is that by performing both tests at the same time we are able to get accurate information in about ninety-eight per cent. of all cases of syphilis.

This being the case, we are bound to consider the serum diagnosis of syphilis as a step of the utmost importance in the diagnosis of this protean malady, and have no doubt that further experience with these tests will result in a simplifying of the technique to such an extent that the test will be placed within the reach of every practitioner with a medical laboratory equipment.

THE IMPORTANCE OF SUPPORTING COMMITTEES.

It is generally admitted that the work attendant upon the performance of the duties of the various committees appointed by medical societies is always a difficult, if not a thankless task, especially if said duties are performed thoroughly and conscientiously. There is always a certain number of members who in their ignorance of all the facts are bound to be in disagreement with the conclusions reached by their representatives. It is the old story of the warrior and the shield repeated with variations.

We have penned the above remarks because of complication which has arisen respecting the transportation committee of the American Institute of Homœopathy. The condition is by no means peculiar as it is of annual repetition. The committee is working hard at the solution of the problem. A self-appointed committee is also at work, as are also the representatives of a certain railroad. We have had a personal intimation from a prominent railroad official, who, by the way, is a personal friend, that our Association is going about things in

a very unbusinesslike way; that the whole affair should be conducted by a central committee, whose decision would be final; that several committees each following out its own lines of procedure cannot get us good rates; that the natural result must be failure and confusion.

The above is mentioned only as an incident. We do not believe there is any feeling in this matter. It is simply misjudged enthusiasm in the cause of the Institute. What has been done in this instance is but a repetition of what has been done before.

Let committees do their work without let or hindrance. If a member has good ideas, let the committee have them. All should work as part of a whole, and not as individual units.

A NEW VIEW OF THE ETIOLOGY OF THE ALBUMINURIA OF PREGNANCY.—Lichtenstein (Leipzig) has suggested a new view of the cause of albuminuria in pregnancy which has much to recommend it. After pointing out that the adherents of the placental or fetal origin have not been able to bring about any unanimity of opinion, he refers to the fact that primiparæ are more frequently affected than multiparæ, and it is in the second half of pregnancy that the symptom commonly occurs. The relief from interference with the pregnancy indicates that it is no serious nephritis, but that the underlying cause is a degeneration. These facts are not in accord with the fetal or placental theory of albuminuria, otherwise the symptom would surely be seen earlier in pregnancy. At the time when the albuminuria mostly occurs the uterus has reached above the umbilicus, and has consequently displaced the intestines, liver and diaphragm, so that there is induced a change in the configuration of the thorax. Dohrn has found a diminution of the sagittal diameter and an increase of the transverse diameter, a condition induced virtually by compression of the thorax. Compression of the thorax induces albuminuria in rabbits, and the same is true of the human being. During compression there is pronounced decrease of arterial pressure, and to this the author ascribes the albuminuria. Together with the above facts, is to be considered that there is an albuminuria dependent upon mechanical causes, and this is found in lordotic spinal deformity, as is known in pædiatrics. The author thinks it of some importance that the albuminuria of pregnancy, the albuminuria of lordosis, and of thoracic compression have in common the two facts of no serious kidney lesion and therefore the rapid restoration of the kidney after the removal of the cause. After enlarging upon the albuminuria of lordosis, the author calls attention that the pregnant woman in the latter months assumes a similar position in walking.—*Monatssch. f. G. u. G.* Vol. XXX, 98.

GLEANINGS

ACUTE EPIDEMIC INFANTILE PARALYSIS.—Prof. Krause (*Deutsche med. Wochenschrift*, 1909, No. 42, reports his observations in more than 100 cases of this morbid condition, together with the data obtained from nine autopsies. In proof of its infectious nature, he notes its appearance in groups of individuals, i. e., in families. Infection occurs via human carriers and attacks, almost invariably, infants, those in the second year of life exhibiting the greatest susceptibility. Its occurrence in adults is rare. As regards locality and season, the disease appears in both thinly and thickly populated districts during the warmer months, and it has been demonstrated in rare instances to have been carried from one place to another by intermediates, e. g., adults, though neither the etiologic factor nor the method of inoculation is known. Apparently, it is not transmitted via articles of food or by vermin. In Westphalia (and in Sweden) marked mortality in young poultry has been noted synchronously with the outbreaks of acute infantile paralysis. Anatomically, the disease leaves only a slight leptomeningitis, and microscopically, but trivial changes in the brain and cord; in eight cases extensive catarrhal alterations were observed regularly in the small and large intestines and also swelling of the spleen and mesenteric glands. The avenue of infection with the supposed virus is probably, gastro-intestinal; at any rate, in one of the epidemics more than 90% of the cases of paralysis were preceded by gastro-intestinal symptoms for several days. The moribific virus is still unknown, though its inoculation in animals has been accomplished, the pathologic material from human sources causing the death of a number of rabbits. In some of these cases, there was a certain "legal" similarity in the initial stage, in the development of the morbid syndrome, and in the time required for the exitus letalis. In so far as symptomatology is concerned, Prof. Krause differentiates two stadia in the course of acute infantile paralysis: (1) That of morbid phenomena in general (usually gastro-intestinal, marked diarrhea, rarely constipation, a steady fever, and almost invariably, conspicuous sweat); (2) the stadium of paralytic phenomena. In many instances there was a synchronous diarrhea in other members of the family; in one instance, this was noted in seven others of the patient's family. Many of the children affected showed great tenderness from pressure on the spine, nape, lower limbs. The paralytic stage began with the irruption of the moribific virus into the blood stream; metastatic foci of inflammation developed in the central nervous system—disseminated myelitis and encephalitis, with inflammatory edematous tumescence encircling the foci. Because of this, the phenomena of paralysis were almost invariably extensive, and for the same reason, they were relatively, rapid in resolution (a few days or one to three weeks). The paralysis commonly begins in the musculature of the neck and extends to the muscles of abdomen and back, after which the paralysis

(those of a leg, an arm, both legs, etc.). In very serious cases, paralyses of the respiratory mechanism are apt to develop, and in lethal cases they appear to be invariable. At the beginning and during the first few hours of paralysis there is high fever, commonly disappearing after 24-48 hours, and followed by remarkably profuse sweating of the pediatric patients. The sensorium remains perfectly clear. In single cases, the paralysis is completely resolved, (in but one of the series cited by the author) the paralyses are of the perfectly relaxed type, the tendon-reflexes abolished, whilst cutaneous, plantar, abdominal and cremasteric reflexes remain unaffected in the great majority of cases. In eight autopsies, Prof. Krause regularly found marked alterations throughout the entire intestinal tract; notable redness and swelling of the mucosa, particularly in Peyer's patches and the follicles, and of the most intense degree in the region of the ileocecal valve; the mesenteric glands greatly swollen and enlarged, the spleen moderately increased in volume and its capsule wrinkled. Treatment: The author, in cases where gastro-intestinal symptoms predominate, endeavors to remove the pathologic content of the gut by the use of calomel or castor oil; in anginal types, a gargle is given; in several cases, lumbar puncture produced more rapid resolution of the paralytic phenomena. Later, galvanism, hydrotherapy, gentle massage with alcoholic solutions, and kinesotherapy were beneficial.

THE ACTION OF TOBACCO ON THE NERVOUS SYSTEM AND THE ORGANISM.—Dr. L. D. Windylschko (*Praktit-scheskij Wratsch*, 1909) educes, from his comprehensive study of the subject, the following data: Tobacco in its three forms of use (smoking, chewing, snuff taking) contains as chief and specific ingredient, nicotin; also a poison, the nature of which has hitherto been unknown, and which develops in rabbits paralysis and emaciation. The pyridins (antiseptic and antispasmodic liquids from dry distillation of organic compounds, chemically, Cs. Hs. N.), in the quantities present in tobacco smoke, produce no visible pathologic effect in rabbits. Nicotin is toxic for all animals, but the degree of susceptibility varies in direct ratio with the complexity of the animal's nervous system; likewise true of the effect of tobacco smoke. In acute nicotin intoxication in animals, all phenomena are plainly due to the electrical action of this alkaloid upon the nervous system; where its action is permitted for a longer time, we have sclerotic changes in the walls of the blood vessels and destructive lesions in the central and peripheral nervous systems. Experimental investigations (by the writer upon himself) to determine the action of nicotin upon the human organism; cases of acute intoxication (often fatal), the results of excessive smoking, and likewise those of the chronic type show that the phenomena caused by nicotinal intoxication are specifically the same as in animals of lower type, and both the human and the animal pathogeneses are identic. The degree of action of tobacco smoke upon the human economy is dependent upon individual susceptibility. Cases of acute poisoning (his "first cigar," etc.) present no demonstrable pathologic lesions and a negligible mortality; whilst the phenomena of chronic intoxication due to continued and excessive smoking are incomparably more frequent. Many of the symptoms developed in such cases are unquestionably specific and due to the nicotinal intoxication, e. g.,

cardiac, amblyopic, amaurotic, auditory, gustatory, olfactory, the peculiar nicotinal aphasia, the dizziness, the tobacco neuritides, and the injurious effects in the mental and genital spheres. All of these phenomena are not necessarily present in the individual case; their development depends upon the degree of resistance exhibited by the individual and upon his quantitative use of the drug. The existence of a "tobacco psychosis," and the opinion that smoking is the etiologic factor in the genesis of psychic morbidities must, at present, be classed as unverified, though it cannot be denied that the habit affects intellectual output and the memory (particularly of appellations and proper names) where its abuse is chronic. Smoking by the young and excessive smoking in general—as demonstrated by numerous statistical data—have indubitable effect upon the genesis of criminality. Though most smokers soon acquire toleration of tobacco, and though, apparently, it develops no pathologic phenomena, it should be remembered that the mode of life pursued by the moderns is also an abnormally, a rapid exhaustion of the vascular system (due to mental and bodily over-exertion, to the component action of many toxic substances: alcohol, tea, coffee, to the sequelæ of infectious diseases, especially of typhoid, etc.) and, naturally, nicotin, with its idiosyncratic sclerotic aptitude, finds modern man an excellent medium wherein to display its powers. Therapeutically, the acute case may be given atropin as physiologic antidote; tannin and iodine water as chemical. In chronic cases, cessation of the habit (suggestion), antisclerotic therapy, special treatment of the organ most affected. In some cases a more or less de-nicotinized tobacco may be used.

THE CAUSE OF DEATH IN THE INSANE AND THE PATHOLOGICO-ANATOMIC DATA FOUND POST-MORTEM.—Dr. R. Ganter gives (*Allg. Zeitschrift für Psychiatrie, u. s. w., Bd. 66, H. 3-4*). the data of 1,017 autopsies (1880-1904). Most deaths occurred from pulmonary disease, particularly from tuberculosis (19.8%). Certain morbid forms exhibit peculiar receptivity for tuberculosis, viz. dementia præcox (45%), imbecility, pre-senile derangements, whilst in paralysis and epilepsy death occurs during an attack, and in senile dementia the greater mortality is from pneumonia.

PATHOLOGIC AND THERAPY OF SYMPATHETIC OPHTHALMIA.—Prof. C. Horstmann (Berlin) in a clinical lecture on the above subject matter said: The essential nature of this morbidity has not been elucidated, but is probably microbic. However, the ectogenic infection gains entrance to the first eye, whence, in some way or other, it passes to and involves the second eye. Whether this sort of metastasis proceeds via the blood or lymph systems or the ciliary nerves is not yet known. At any rate, sympathetic ophthalmia is invariably progressive, passing from one eye to the other. The safest therapy is the enucleation of the organ, other measures such as exenteratis bulbi, resectis optico-ciliaris not offering as much warranty of cure because of our ignorance of the actual avenues of infection. Though it be quite possible to avoid the disease, it is extremely difficult to cure it after efflorescence. Sympathetic irritations such as uveitis serosa sympathica, papilloretinitis sympathica are easily disposed of, but, uveitis fibrinosa sympathica is a condition of extreme gravity, and, once

initiated, treatment offers little hope. If sympathetic inflammation of the second eye develop, therapy must be as mild as possible. Atropin is always indicated, together with the removal or avoidance of all harmful influences, protection against bright light, lukewarm compresses where local irritation is marked. Other measures commended is the inunction of gray ointment, sweatings, subconjunctival infusion of normal saline or hydrarg. oxycyanat. 1-2000 (Schirmer). Of the greatest importance is the avoidance of all operative measures upon the sympathetically affected eye, for exacerbation of the inflammation invariably follows. Enucleation of the eye first affected is indicated, according to Schirmer, if blindness of that eye is complete at the time of occurrence of the sympathetic uveitis in the second eye. As long, however, as there is the least vision in the eye first affected, surgery is contra-indicated, for the eye sympathetically involved may be lost whilst the other still retains some powers of vision. Moreover, a decisive turn of affairs in the organ suffering sympathetically is not got by enucleation.—*Deut. med. Woch.*, No. 44, 1909.

DISTRIBUTION OF ENCEPHALIC HAEMORRHAGES.—Examination of Spiller's collection of 93 hæmorrhagic or softened brains showed that the anterior choroid, the posterior communicating, and the posterior cerebral arteries were the cause of the condition equally as frequently as the striate group of vessels. Injected brains showed that the internal capsule derives its blood supply from the striate vessels, the anterior cerebral, the posterior communicating, and the anterior choroid arteries. The caudate nucleus is supplied by the anterior cerebral and the striate vessels. The striate vessels do not supply the optic thalamus; this structure receiving its blood through the posterior cerebral, and the posterior communicating arteries. The lenticular nucleus derives its blood supply in part from the anterior cerebral and the anterior choroid, but mainly from the striate vessels. That there is any particular one of the striate vessels which is worthy of distinction from its fellows by receiving either of the names lenticular striate, lenticular optic, or artery of cerebral hæmorrhage, is discredited by the author.—S. D. W. Ludlum, *Jour. of Nervous and Mental Diseases*, December, 1909, p. 705.

CHARLES D. FOX, M. D.

CERTAIN HITHERTO UNPUBLISHED DATA CONCERNING THE INSANE.—According to Phelps' table of 1,000 insane persons admitted to the Roche State Hospital, 150 died, 160 were discharged recovered, 150 were discharged improved, and 5 were discharged unimproved during the first year of their detention. Almost one half then, of these 1,000 cases came to a termination before a year had passed. Of the 127 cases who remained in the hospital after the thirteenth year of detention not any subsequently were discharged, and it was not until the fortieth year that all had died.—*Jour. of the A. M. A.*, Dec. 11, 1909, p. 1993.

CHARLES D. FOX, M. D.

TRUE TIC DOULOUREUX OF THE SENSORY FILAMENTS OF THE FACIAL NERVE.—The ganglion of the facial nerve, the geniculate ganglion, is subject to inflammation, herpes zoster, and degeneration, facial tic douloureux. Both herpes zoster and tic douloureux of the facial nerve affect the interior of the auricle and the external canal. The anterior wall of the external auditory meatus and the skin just in front of the ear is supplied by the auriculo-temporal branch of the trifacial nerve as well as by sensory filaments of the facial nerve. Tic douloureux of the trifacial may be a reflex concomitant of tic douloureux of the facial. Formerly, dental caries was supposed to be the reflex cause of most cases of otalgia. No doubt diseases of the teeth, nose and throat may, in a reflex manner, occasion otalgia, but the importance of these factors has been overestimated. Medical treatment of a case of facial tic douloureux having failed there is but one practicable resource, namely, physiological extirpation of the geniculate ganglion by division of its posterior root, the nerve of Wrisberg. The authors, L. Pierce Clark and Alfred S. Taylor, report the first case in which this operation has been performed. The operation was a success.—*Jour. of the A. M. A.*, Dec. 25, 1909, p. 2144.

CHARLES D. FOX, M. D.

PUERPERAL AUTOINFECTION.—From a most thorough study of the bacteriological conditions of the genital secretion during delivery and the puerperal period, with especial reference to the question of puerperal autoinfection, which Wegelius, (Helsingfore) has reported in a voluminous paper, it appears that before and during labor, there is in most cases a marked difference between the bacterial flora of the vulvar and of the vaginal secretion. This difference is reported with much detail. In one case a change had taken place in the vaginal flora, and was replaced by an abundant growth of those found about the vulva at the time of labor. In the uterus on the fourth day after delivery there are sometimes no bacteria or but few, and then they are such as are found about the vulva. On the ninth day post partum more bacteria are found than on the fourth day, but even thus late there may be no micro-organisms. In regard to autoinfection, the studies have shown that the anærobic bacteria of the vulvar secretion may ascend into the uterus and may cause clinical symptoms such as elevation of temperature, sensitiveness to pressure over the uterus, and offensive lochia. On the other hand, one of the cases shows that a virulent strain of bacteria, such as the bacillus phlegmones emphysematousæ, which under certain circumstances may produce serious and even fatal disturbances, may enter the puerperal uterus without producing any clinical symptoms. In regard to streptococci, the most important of all, the author has had no opportunity of studying cases affected by them; in fact among 1,600 deliveries there were no deaths. Natvig has, however, shown that these virulent germs may ascend to the uterus from the vulva. In one of the latter's cases a virulent variety of streptococci was found at the vulva and not in the vagina. During the puerperium they ascended to the uterus and already on the fourth day were demonstrated there and excited a puerperal endometritis with serious symptoms. They displaced the other micro-organisms almost entirely in the uterus and vagina and were still found in the uterine secretion on the fifteenth day.

From the studies of the author and from those of Natvig it appears in regard to the question of puerperal autoinfection, that for streptococci and also anaerobic bacteria there is the possibility of them ascending into the vagina and into the uterus and inducing serious symptoms. The practical results deducible from the foregoing are that we should pay more strict attention to disinfection of the external genitalia before and during labor. Since one single thorough disinfection of the pudenda is not possible because of the sensitiveness of the sac, we should use frequently repeated weaker antiseptic precautions. Just how far the facts demonstrated in these bacteriological studies can be used in determining the value of vaginal disinfection, as opposed to its known disadvantages, cannot yet be determined. It is certain, however, that the frequent use of weak antiseptic solutions upon the vulva during the puerperium, as most of us commonly order, has received scientific confirmation.—*Arch. f. Gyn.* Vol. 88, 249.

THEODORE J. GRAMM, M. D.

METASTASES IN THE ABDOMINAL CAVITY IN UTERINE CANCER.—Offergeld's studies have shown that secondary nodules appear in the peritoneal cavity mostly in advanced cases, but occasionally in the first stages, an important fact for treatment and operative technique. They arise by continuity or implantations. The points of predilection are the retrouterine fossa and the dome of the diaphragm. Whether all these cases have really arisen secondarily from the uterine cancer, or whether there is a multiplicity of the cancer could not be possibly determined. The secondary nodules in the omentum and in the muscle of the intestinal tract are of lymphatic origin. The most noticeable symptoms of these tumors consist in the appearance of an abdominal tumor, of peritonitis and stenosis; mostly, however, they induce no symptoms.

Liver metastases are found in from 5 to 15% of cases. They may arise in all stages of the disease; they are encountered in early cancer and in inoperable cases. The liver metastases, which for a long time may be the only ones, should be removed at the time of operating the primary tumor; hence the abdominal route should always be selected for total extirpation. They usually cause no symptoms from their size, number, or location. Liver metastases may arise through the blood current, or by way of the hepatic artery after passing the pulmonary circuit, which is rare; or through the portal vein directly from local penetration of the cancer into the circulation in its upper part or into the inferior hemorrhoidal vein; or from the veins which form the connection between the inferior vena cava and the portal vein above the suprarenal veins, the same which are involved in pulmonary embolism in abdominal operations. Metastases arising through the lymphatics come through those vessels which are within the territory of the portal vein in the pelvis, and through retrograde transportation from lymphatic glands to the portal vein. For localization of metastases in the liver the circumstance is favorable that two capillary systems exist there, while unfavorable in its fermentative activity whereby large masses of tumor cells brought there as emboli, are destroyed. Therefore liver metastases only occur after some injury to the organism and indicate a weakening of its fermentative activity.

In the pancreas, metastases are quite rare. In advanced cases they may occur and are then situated in the head of the organ. They arise from retrograde transportation from the retroperitoneal glands; the hæmatogenic origin is of less importance. They usually cause no symptoms or else exhibit the symptoms of a tumor; hence they are rarely recognized during life.—*Arch. f. Gyn.* Vol. 87, 298.

THEODORE J. GRAMM, M. D.

PUERPERAL INFECTIONS.—At the XIII annual meeting of the German Gynecological Society recently held in Strassburg, the subject for discussion was the treatment of puerperal infections. In a general review of the internal treatment Walthard said that fortifying the natural antitoxic powers of an infected woman through general inorganic antiseptics has so far not been accomplished in practical form. The same is true of the production of artificial hyperleucocytosis. Of passive immunization against puerperal streptococci, the writer says the clinical results of sero-therapy of puerperal streptococci infections with the antistreptococcus sera of commerce has still remained uncertain. This conclusion stands even when allowance is made for many failures due to a too late or improper use of the serum. Of the various means of eliminating the poisons in puerperal infections, foremost is the diuretic action of infusion. But this procedure only serves to dilute the toxine in the blood and tissues. Artificial catalysis, the direct action of chemical substances like the metals or metallic salts, for the purpose of hastening oxydation and reduction has not been attended by uniform results. The treatment of puerperal infection by means of specific antidotes has not been possible. Diet is of the greatest importance. In order to prevent a diminution of water in the tissues we should make use of rectal or subcutaneous injections. In view of the tissue changes in such subjects alcohol is still to be particularly recommended.—*Monatsschr. f. G. u. G.* Vol. XXX, 66.

THEODORE J. GRAMM, M. D.

LOCAL TREATMENT OF PUERPERAL INFECTIONS.—In summarizing the situation Winter says two indications present: 1st, combatting the tissue infections; and 2nd, treating the resorption fever and the local degenerative changes for the purpose of preventing a possible later tissue infection. Still we must remember that it is impossible to destroy the streptococci which have entered the tissues, or by means of treatment to prevent the extrauterine or general disease. If the case is left untreated the course is about thus: A pure resorption fever usually terminates in about a day with no after effects. Endometritis continues about five or six days. Infected lacerations in the vagina and in the cervix heal spontaneously, if no serious tissue infection has occurred. Intoxications from retained membrane tend to continue longer but ultimately cease. In retained placental fragments serious disease generally only follows artificial removal. On the other hand, of the various means of treatment it may be said that vaginal douches are able to mitigate and shorten localized degenerative changes and also favorably affect toxic symptoms as far as they proceed from the vagina. We should remember that they sometimes do harm. Uterine irrigation in the hands of an unskilled operator may easily do

harm. They are indicated for combatting toxic symptoms in retained lochia; in treating a protracted puerperal endometritis; before and after every intrauterine intervention made in a febrile puerperæ. Permanent irrigation is scarcely used to-day. Drainage of the uterine cavity is only proper when retention of secretions cannot be otherwise prevented. Cauterization of the diseased uterine mucous membrane is ineffective and can only do harm. The same is true of atmokausis and brushing out of the utrine cavity. The use of the curette in the puerperium should be entirely abandoned as useless and dangerous. In reference to retained placental fragments, spontaneous expulsion should be encouraged. When they cause serious symptoms they should be removed by the finger. If the infection is localized outside the uterus, it is dangerous to remove them. Infected puerperal wounds should be treated by removing all stitches, the crevices irrigated and packed with iodoform gauze.—*Monatsschr, f. G. u. G.* Vol. XXX, 67.

THEODORE J. GRAMM, M. D.

RETAINED PLACENTAL FRAGMENTS.—Winter's paper on this subject at the Strassburg meeting was discussed by Veit at a meeting of the Leipzig society, and his comments are a valuable contribution to the indications for operating. His remarks were directed mainly to the treatment called for when fragments of placenta are presumed to have been retained, and he cites cases in illustration. In brief, Veit said that by means of microscopical and bacteriological examinations of the vaginal secretion we should determine the treatment that may cure the patient. When putrefactive germs only are found in a patient having fever and retained placental fragments, the latter should be immediately removed. If virulent streptococci are present, in the vaginal secretion and absent in the blood, expectant treatment only is called for. If the streptococci are not virulent, the placental fragments should be removed. With virulent germs in the blood and in the vagina the removal is attended by a grave prognosis; and the removal of the uterus, while it may be tried, is also attended by a bad prognosis.—*Centralbl. f. Gyn.* 1909, 1123.

THEODORE J. GRAMM, M. D.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY A. LEIGHT MONROE,
Miami, Florida.

A COMPARISON OF THE SKIN SYMPTOMS OF RHUS RADICANS WITH THOSE OF RHUS TOX.—In a general way it may be stated that the skin effects of rhus radicans are more marked than those of rhus tox., but it must be remembered that the majority of the records of poisonings are said to concern the radicans variety. Itching and burning of the skin in various parts is common to both and is temporarily relieved by vigorous rubbing. Likewise are vesicular eruptions found in both. Rhus radicans seems to produce greater infiltration of the skin with heat and swelling, also tubercles in the skin which nodular infiltrations if large, sometimes slowly suppurate. Under Rhus tox. we frequently find vesicular eruptions with small red points, itching and burning and relieved by holding the affected part in water as hot as can be borne, but worse as soon as exposure to cold air occurs. Rubbing or scratching although they give momentary ease, are followed by a marked increase of suffering. In Rhus radicans we note marked relief to these sensations by washing in cold water, a modality which the essayist has had occasion to verify. Conversely a warm drink aggravates the unpleasant sensations of the radicans patient. In both varieties rubbing the skin will at any time reproduce the itching and burning.

The foregoing represents the differences which a careful comparison of Rhus radicans with Rhus toxicodendron shows. Such comparison is extremely unsatisfactory for the reason that the original provings as recorded in the *Materia Medica Pura*, Allen's *Encyclopædia* and other works, make scarcely any distinction between these two forms of Rhus. Indeed the majority of instances is not stated whether the radicans or the toxicodendron is referred to. The *Symptomen Codex*, as before observed, is the only work which makes any differentiation. In "Jahr and Gruner's *Homœopathic Pharmacopœia and Posology*" translated by Hempel and published by Radde in 1850, the botanical differences are briefly alluded to. Hahnemann in "Die Reine Aazneinittellehre" makes no distinction but speaks of "Rhus radicans or also Rhus toxicodendron."—Dr. R. F. Rabe, September *Medical Advance*.

JABORANDI AND RUTA GRAVEOLENS IN EYE DISEASES.—I wish to particularly speak of the action of a couple of remedies which have not received the attention they deserve in diseases of the eye. The first is Jaborandi. Our knowledge of it is largely clinical. We find this symptomatology: Con-

traction of pupil. The state of vision is constantly changing, everything at a distance appeared hazy, and although he could read moderately-sized type at one foot, at greater distance was indistinct; vision becomes more or less indistinct every few moments. This is a set of symptoms very closely simulating spasm or irritability of the ciliary muscle and may be caused by eye strain of any character. In cases of myopia or other refractive error we have noticed this remedy has pronounced action on the eyes, as spots in the visual field, especially pronounced on stooping. The spots are characteristic. Eyes easily tire from slightest use. Another clinical symptom is nausea produced on looking at objects moving. Heat and burning in eyes on use. Headache and smarting and pain in globe on use. Dim vision and twitching of lids. Retinal images retained long after using. In consequence of this train of symptoms we have found Jaborandi a most valuable remedy in eye strain from whatever cause. The use of the eyes by our modern electric light entails more strain than our forefathers felt in the use of the old-fashioned candle. This is accounted for by the fact that the electric light contains certain rays of an irritating character which the candle or kerosene lamp do not contain. Jaborandi is of service in cases of irritation from the electric or other artificial light and in children who overuse their eyes in school, and vast numbers of children do, especially when there is a slight refractive error.

We not infrequently find children, as well as adults, who suffer from a slight tendency to strabismus or a heterophoria, who complain of headache and nervous disturbance, who are relieved at least temporarily by Jaborandi. Always think of Jaborandi as one of the remedies in eye strain.

Another remedy quite analogous to Jaborandi, much more frequently prescribed, but to my mind not nearly so frequently indicated is:

Ruta graveolens. With this remedy we have pressure deep in the orbits. Pain as from a bruise in the tarsal cartilage. Pressure over eye brow. Sensation of heat and fire in the eyes and aching while reading. The eyes feel fatigued as after reading too long. Vision weak, eye strained. This remedy is valuable in asthenopia, when we have the characteristic heat and aching in and over the eyes, lachrymation and blurring of letters. Straining of the eyes at very fine work is often relieved by Ruta. On the whole the symptoms of Ruta are quite similar to Jaborandi and it is often other than the eye symptoms that differentiate. In prescribing I not infrequently find a rheumatic tendency in the Ruta case, which is not present in Jaborandi. In the latter also there is a more pronounced ciliary spasm.

But in prescribing remedies for an eye strain we should not forget that the majority of cases are dependent on errors of refraction or accommodation which render absolutely necessary the proper selection of lenses before the asthenopic symptoms can be brought permanently under control by the most accurate of prescriptions.—Dr. F. I. Newberry in November *Pacific Coast Journal of Homoeopathy*.

SPONGIA MARINA TOSTA.—By C. E. Chase, M. D., Utica, N. Y. This was one of the earlier Hahnemannian remedies, published in the *Materia Medica Pura*, and proven quite thoroughly by several persons of both sexes, as was Hahnemann's custom.

It is the ordinary sponge of commerce freed from stones and other im-

purities, and toasted to a dark brown color; it is then pulverized, and a tincture made by maceration in alcohol.

It is not my purpose to give a detailed pathogenesis of this remedy, as its symptomatology is more or less familiar to all of you, and can easily be verified by reference to any of the *Materia Medica*s; while its sphere of action is comparatively limited, it is a most valuable remedy within that sphere, but nevertheless often neglected by the average practitioner, if I may be permitted to judge by myself, as a fair example of that interesting personage.

The use which enters our mind at once on hearing the name of *Spongia* is as a member of that classical homœopathic trilogy, of *aconite*, *spongia*, and *hepar sulph.* in acute catarrhal or croupous laryngitis; for many decades of homœopathic history, these medicines have held their place, in both professional and domestic circles, as the all sufficient remedies in the vast majority of cases of this most common, as well as alarming and dangerous disease.

Spongia is here the keystone of the arch, as its action combines not only the catarrhal element and laryngeal spasm of the milder cases, but, as well, those more severe and dangerous conditions characterized by fibrinous infiltration, with real laryngeal obstruction.

Usually *acon.* is the first remedy to be used, indicated by its febrile action, which is more marked under that remedy than under *spongia*, as well as by the dry cough, laryngeal spasm, anxiety and fear of death; if the disease has continued, however, longer than a day or two, *spongia* will be a better remedy as its action is deeper than that of *acon.* and it has the same anxiety and nervous excitement, sudden waking from sleep with fear of suffocation, loud dry barking cough; and stridulous breathing, after a few hours this dry condition of the mucus membrane will be relieved, the cough becoming loose and rattling, and *hepar* will take the place of *spongia*; *calc. iod.* will often supplement *spongia*, or follow it well, when the latter does not promptly relieve the difficult breathing and harsh dry cough of this disease.

In other diseases of the chest, *Spongia* is also very useful; in catarrhal laryngitis, in whooping cough, with the hard dry painful cough, waking suddenly from sleep, with anxiety. Even in tuberculosis it is not to be overlooked, as it has numerous cough symptoms, mostly dry, hard barking cough, better by lying down, relieved by eating and drinking, especially warm drinks as luke-warm tea;

"Irrepressible cough, from a spot deep in the chest, where it pains as if became raw, and sore, bleeding from the coughing."

"Congestion of the chest when moving about, with sudden weakness as if he would fall."

Cough is excited by deep breathing or by talking, by dry cold winds.

A most important action of *spongia* is its effects upon the glands.

The cervical glands become much swollen, with tensive pains on turning the head, glands painful on pressure, stiffness of neck on stooping and turning the head; pressure on the neck; the swollen glands pain.

In goitre it is one of the indispensable remedies, and is reputed to have cured hundreds of cases; many symptoms of its pathogenesis point to this disease and *spongia* was the chief ingredient, in connection with *Ova testis*,

in Gunther's Goitre Powder, which attained a large popularity against the disease.

It is also a principal remedy against Basedow's Disease, or Exophthalmic Goitre, as is very marked evidence by the symptoms of: Pressure in the eyes with protrusion, large swelling of the thyroid gland, with stitches and tenderness, intolerance to pressure about the neck, suffocating attacks, palpitation of the heart, etc. A number of cures have been recorded of this disease with spongia.

Orchitis and epididymitis, after the acute stage, which is better treated by puls., or hamam., or bell., may be often cured by spongia; chronic cases after gonorrhœa, with large hard swelling of the testicle, with tensive pains, soreness, and a slow stitch shooting up the spermatic cord.

Last, but by no means least among the uses of spongia, comes its action upon the heart and blood vessels, especially in endocarditis and valvular disease following rheumatism. That it has a place as a heart remedy, is shown by its peculiar nervous symptoms of sudden excitement and fear of suffocation, waking one out of a sleep at night, usually about midnight, with inability to lie down, difficulty of breathing, rapid and tumultuous beating of the heart.

In the *North American Review*, published in the early 60's; and which, by the way, was one of the best homœopathic journals ever published, full of valuable practical articles, the late Dr. P. P. Wells, of Brooklyn, N. Y., in an article on rheumatism, describes in a vivid and masterly way, the position which spongia occupies in this class of cases; I can do no better than quote his descriptions:

He first mentions the effect of an involuntary proving of the drug by an old colored servant, who had an organic disease of the heart, who stealthily stole and ate a piece of fresh roasted sponge. The effect was sudden and alarming. It produced a terrible beating of the heart, a suffocation which threatened to prove fatal, her lips became livid, respiration violently gasping, great pain in the heart, terror, and fear of approaching death. After ten or fifteen minutes, the symptoms began gradually to subside, and the dose was followed by a very remarkable relief of her old heart symptoms, which lasted for several weeks.

Some time after this, the Doctor was called in great excitement, at about two a. m., to the bedside of a patient whose rheumatism had left the lumbar muscles and seized the heart, and this was the second similar metastasis in the case. The patient was awakened between one and two a. m., by a sense of suffocation, accompanied by violent loud cough, great alarm, agitation, anxiety, and difficult respiration. The action of the heart was violent and rapid, and each beat was accompanied by a loud blowing as of a bellows. He immediately gave a dose of the 200th of spongia. The relief to the distressing symptoms was prompt, remarkable, and permanent. The bellows sound, which was loud, gradually disappeared, and in a day or two ceased to be heard. He says further, that he has repeatedly had opportunity to observe the speedy, rapid disappearance of the valvular murmur, after giving this remedy, and corresponding disappearance of the subjective symptoms of the case, quite as satisfactory and remarkable as are often the result of the same remedy in croup. These symptoms would seem to indicate that spongia occupies an important place in the treatment of

acute endocarditis with deposits on the valves, and that it should have serious consideration in these cases; and while it has been frequently overlooked, many cases published in the journals as cured or relieved, attest its great value.

The relationship of spongia with other remedies is somewhat restricted, in accordance with its limited sphere of action. Farrington appends it to the balogenic iodine, fluorine, chlorine and bromine; iodine and bromine are found in its composition, as well as calcarea, silica, etc., so that it touches these remedies in various aspects. It is related to iodine closely in its glandular action, though with quite marked distinctions; in croup, it is to be distinguished carefully from iodine and bromine, and is followed closely by kali bich, after exudation is pronounced, and by kaolin in still more severe cases.

The bronchial symptoms are to be compared with phos. and sanguinaria and it resembles anacard in the relief after eating and drinking.

In heart cases, it may be compared with acon., apig., cactus, lach, etc. It follows, acon. well after congestion has given place to beginning fibrinous deposition on the valves; spigelia has more sharp cutting pain, cactus more compression and constriction; lachesis is adapted to more advanced cases of a septic nature, or of serious effusion, with a strong nervous element.—*North American Jour. of Homoeopathy.*

KALI CARB. is one of my favorite medicines. I am deeply indebted to it in that it cured my wife of threatened phthisis—profuse night sweats, loss of flesh, a tickling cough of a severely paroxysmal character which quite exhausted her, loss of appetite and strength. There was also a deep brown pigmentation of the skin, which the late Dr. Compton Burnett recognized as a frequent symptom in the tuberculosis disease. Kali carb. 6 was taken with great relief to her cough. Tuberculinum Heathi 200, gtt. v. once a week, and lycopodium 3x gr. ii t.d.s. helped in a complete restoration of health and strength.

I have frequently found the medicine succeed in coughs with dark grey or yellow expectoration, > 2 to 4 or 5 a. m., particularly when accompanied by stitching pains in the chest.

In onanists and others who suffer from seminal losses and complain of a weak, tired, aching feeling in the eyes and a sense of general exhaustion it rivals natrum muriaticum.

Acute edematous swellings of the upper eyelids I have cured in several instances, and three cases of whooping cough with puffiness of the upper eyelids were speedily cured with kali carb. 6.

My first experience with kali carb, was some fifteen years ago, when Mr. J. C., aet. 46 years, stout, of medium height and fair complexion, consulted me for a severe cough attended by retching and stitching pains in the chest. Cough > after rising, and sometimes causing vomiting of breakfast. This had continued many weeks. Kali carb. 6 2tt. cured him so speedily that the whole family were converted to homœopathy.—R. S. Stephenson, M. D., *Hom. World.*

HYOSCYAMUS AND STRAMONIUM.—The following article by Joseph H. Niederkron, M. D., Versailles, Ohio, will be of value to the homœopathic physician, although having a most familiar sound:

The value of these remedies cannot be appreciated unless they are employed in practice, and to determine their exact therapeutic field requires a thorough familiarity with the many details which go to make direct medication a pleasant, successful and scientific study. These are not remedies that can be employed indiscriminately and a successful issue expected from such manner of prescribing, but each in his own place will prove, with positiveness, just what it will do and do it pleasantly. Whilst they possess similar properties, both being powerful narcotics, yet each one will do what the other will not do, and neither can be substituted for the other, at least should not be.

Hyoscyamus has the wider range of application, but the field of application of stramonium is by no means so limited as is commonly supposed. In my opinion hyoscyamus and stramonium are two of our best delirium remedies; and for the specific medicationist, the study of each for its therapeutic position is certainly interesting and will prove quite entertaining.

Hyoscyamus is indicated in any case where there is busy delirium. muttering, the patient constantly busy during delirium, will answer questions but soon goes off into his wild talk; patient seems sleepy but will not sleep; has a wild look and restless eyes, and if he has been violent in his delirium, the low muttering form soon takes place and perhaps increases to almost complete unconsciousness, but still busy. If there is fever the face is flushed, there are sordes on teeth and tongue. In delirium tremens I believe it will give best results when the delirium is not so active but assumes a muttering character. The wild furious delirium needs stramonium, and, in my opinion, here is where the distinction between these two great remedies comes in. The stramonium patient is enraged, furious, wild, loud, wants to destroy himself or anybody, and it is surprising how long and well his strength perseveres. It does seem that these two remedies plainly show what it means, to get physiological action and the therapeutic effect of a drug. Just recently I had it proven what stramonium can do with a furious delirium in delirium tremens. I thought my remedies were well selected, still my patient kept four attendants busy, with no signs of effect from remedies. Stramonium soon proved its effect and brought about tranquility and sleep.

The chief distinction between these remedies can be briefly said to be as follows: Hyoscyamus for a low, muttering delirium, and stramonium for a wild, furious, delirium; of course the many other details going to assist in making a more definite distinction.

The dose of either should be small. It is my custom to add eight or ten drops of specific hyoscyamus to four ounces of water. Mix, and give a teaspoonful of this mixture every half hour.

Opiates, sometimes, are a good thing; but to administer them without due regard for our patient is a practice to be discouraged. Hyoscyamus and stramonium, when they are distinctly indicated, will prove their superior merits, and the pleasant recoveries following their exhibition will go far to prove their worth.—*International Homoeopathic Review*, January, 1910. *North American Journal of Homoeopathy*.

THERAPEUTICS OF CALCIUM SULPHIDE.—In the *Medical Record* of September 25 we find an article on Calcium Sulphide in relation to surgery, by an allopathic physician, Dr. Usher, who is in charge of the American

Mission Hospital, in Van, Turkey. The article has much in it that sounds familiar to homœopathic ears. Although the author says "Calcium sulphide is a drug of which leading authors know or believe little," we might inform the doctor that the "leading authors" of the homœopathic school of medicine have known, believed in, and used the drug since the time of Hahnemann, about 1810, under the name of *Hepar sulphuris calcarea*. Further the doctor informs us that his attention was called to it by Dr. A. M. Wilson, of Kansas City, who advised the remedy in otitis media and ferunculus. Certainly the doctor's experiences with Calcium sulphide are most interesting. Practicing upon a people who have an instinctive and religious dread of the knife, he felt himself obliged to find something to take its place and tried Calcium sulphide with such remarkable results that he has come out and championed its use in abscesses and purulent conditions. He relates several cases of abscess cured by the remedy, one of periosteal suppuration, where a $\frac{1}{4}$ grain dose was given and the pus cleared away as if by magic and the sinuses closed. Another cure was reported of fallopian tube abscess, another case was reported wherein it failed, which is evidence that the doctor has much to learn yet about the remedy, for it was a case of malignant sepsis and beyond the pale of Calcium sulphide. Someone should have told him about *Lachesis* and *Carbo vegetabilis*. The doctor sums up his article by stating:

First. Calcium sulphide will disinfect pus formation. "For some unknown reason, possibly non-absorption or age of drug, it is not always specific."

Second. It is a specific cure and prophylactic in typhus, prison fever and ship fever.

Third. It is a prophylactic in measles and scarlet fever.

Fourth. It prevents small-pox pitting.

The dose recommended is $\frac{1}{2}$ grain every 2 hours or $\frac{1}{4}$ grain every hour, though he has found that 1-20 grain has been productive of benefit.

The whole article evidences a crude homœopathy, applied on allopathic principles.

We can assure the doctor that the reason why "it is not always specific" does not lie in the causes he mentions alone, though he has stumbled upon one of them, namely, its "non-absorption." If he will lessen the dose to 1-100 or 1-1000 of a grain, and use homœopathic trituration, he will find its absorption powers increased, but even then it will not always be specific, for to be specific it must be indicated by its homœopathic similarity. As to its prophylactic powers in the various affections, this may be a valuable use of the drug in the class of patients he has to treat, being of the lower and filthy classes of an oriental land whose diseases are likely combined with purulent infections. We believe that Dr. Ussher has in him the making of a good homœopathic physician, that he is an observer is plain, and that he has a chance to try our remedies under unfavorable circumstances is also a fact, and we hope that he may do so. We would advise him to get some homœopathic preparations of *Hepar sulphur* and a book on homœopathic indications, and we are all confident the reasons why it fails in some cases and succeeds in others will be quite clear.—Editorial in December, 1909, *Journal of American Institute of Homœopathy*.

FOREIGN LITERATURE

CONDUCTED BY E. FORNIAS, M. D.

DIET FOR CONSUMPTIVES.—In the month of March of last year Prof. Robin, of Paris, delivered a lecture on the diet of consumptives, in the *Hospital Beaujon*, and among many other interesting things he said that *overalimentation of tuberculous patients* have led to all sorts of gastric, intestinal, renal and febrile troubles. Some patients have had hemoptysis, and many curable consumptives have become incurable. The method usually employed is deplorable; what is needed is a *rational alimentation*, comprising a slight excess of the normal nutritive schedule, say about 45 calories for kilogramme of weight.

The nutriment should be varied; the exclusive or exaggerated regimen diminish the appetite and cause anorexia. In general, three meals are sufficient, unless the amount of food taken was insufficient or that the individual was a great eater. A tuberculous subject should masticate with care, speak little, and rest on a lounge after meals.

The quantity and quality of the food should be proportioned to the digestive power and to individual peculiarities. In a *hypersthenic* we must increase the ternary aliments and diminish animal food; to those who suffer from diarrhœa we should order, besides astringent food, *medlar, bilberry and quince*. In case of absolute intolerance, an absolute *milk diet* should be prescribed, about 60 grammes of milk for kilo of weight, in 24 hours.

The aliments preferred should be those which possess therapeutic properties. Tuberculous patients become demineralized, and we should bear in mind the list of aliments capable of repairing their loss. *Lime, Magnesia, Silica, Iron, Iodum, and Phosphorus* are contained in many usual alimentary products. We find *Lime* in the eggs, in milk, in string beans, in cabbage, in asparagus, in strawberries, in oranges, and in figs. *Magnesia* is contained in eggs, in brains, in sweetbreads, in brussel sprouts, in apples, and in chestnuts. We isolate *Phosphorus* from eggs, milk, veal, fish, cheese, fish roe, dry vegetables, carrots, almonds, figs and dates. *Iron* is a constituent of eggs, beef, dry vegetables, rice, asparagus, turnips, brussels sprouts, green salads, spinach, and apples, pears, strawberries and plums also contain iron. Other aliments contain *Silica*, such as string beans, beans, green salads, cauliflower, raisins, and apples. And if we wish to prescribe *Iodum*, we should remember that this drug is found in shrimps, lobsters, string beans, carrots, asparagus, rice, pineapples and strawberries.

Raw meat is one of the most useful aliments for the consumptive. More than 100 to 150 grammes daily should not be allowed, for larger doses may bring about overactivity of the respiratory exchanges. But raw meat, bet-

ter digested than cooked meat, and rich in useful ferments for the general nutrition, is often repugnant to the patient. To make it acceptable it should first of all be grated with a knife, then pounded in a mortar, and finally deprived of its tendinous part. So prepared, it can be presented between two slices of buttered bread, covered with thin layers of ham; a sort of *sandwich*, containing 25 grammes of *raw meat* between interposed layers of butter and ham; or if preferred, it can be made in the shape of balls of pounded meat, which after being soaked in alcohol are lit and offered to the patient (*a la flamme*); or still, the meat pulp can be mixed with aromatic bouillon, made with celery or clove, or with nutmeg. Porridge made with carrots and raw meat is classic; the red color of the vegetable conceals that of the meat. We can also prescribe *ices* made with raw meats and currants, or "*conserves de Damas*" as follows:

50 grammes of raw meat.

5 grammes of sugar.

100 to 250 grammes of currant jelly.

Yvon's formula is:

100 grammes of raw meat.

30 grammes of sweet almonds.

2 grammes of bitter almonds.

30 grammes of sugar.

After raw meat come *eggs*. We should never allow more than 3 to 4 daily; amount which can be raised in the big eaters to 5 or 6. Six eggs contain 21 milligr. of iron, 12 milligr. of silica, and 1 gr. 50 of lecithin (neutral phosphorated fat).

Gelatin, an albuminoid from animal tissue, is given in doses of 25 to 30 grammes daily. It is obtained from calf's head, mutton and pig knuckles, animal and fruit jellies, &c. In the home of the poor one can utilize the *gelatin of commerce* (isinglass) pulverized and sprinkled over the food, or also incorporated in doses of 20 grammes to the litre of bouillon, or meat broth made with plenty of bones and aponeurosis. This bouillon or broth should be taken, half hot and half iced.

As a condiment we can still recommend meat jellies, flavored with tarragon or cognac, which can be added to different aliments. The ordinary *bouillon* is very nourishing. Each litre contains 4 grammes 1 g. of salts of potassium and magnesia, 7 gr. 50 of albuminoids and collagenous substances. It is an spare agent, remineralizing, peptogenic and even diuretic.

Among the other aliments recommended, we may mention *calf's liver*, which contains glycogen, iron and phosphorated fat; also *brains* and *marrow*, rich in *lecithin*; *sweet breads*, which contains both nuclein and collagenous substances; *meagre fishes* (sole, whiting, brill, pike) which hold phosphates; *turtle soup* which is besides gelatinous; *oysters*, *shrimps*, *crabs*, *caviar*, are useful on account of the *phosphorus* they contain.

The *condiments* should not be forbidden. They stimulate the appetite and aid digestion when taken in small quantities. The list includes: Vanilla, clove, cinnamon, which contains aldehyd and cinnamic acid; sage, wild thyme, ginger, garlic, onion, horse radish, and mustard, which contains the sulpho-cyanide of allyl.

Sea salt, besides its favorable action on digestion, stimulates the hema-

topoistic organs and protects the albuminoids against dissimilating processes. The organism requires 10 to 12 grammes of salt in 24 hours, without the alimentary salt (about 1 gr. 50).

Sugars are also necessary, the daily doses being from 70 to 100 grammes (Laufer). They retard the dissimilation of fatty substances.

In regard to the preparation of the consumptive's food it should be pleasing both to taste and eye. The *meats* should be broiled or spitted, and presented with their juice or a sauce made with butter. The *fish* should be always boiled in wine sauce (*butter sauce*), or boiled in wine that is not acid flavored with cinnamon, garlic or onion. The whiting and the sole may be allowed fried, as the skin of these fishes is easily detached. Fish balls with butter sauce, vegetables boiled in water and salt, with fresh butter, peeled potatoes with fresh butter and salt, complete the bill of fare. The potatoes can be prepared in another way: In an iron pot we put first butter, salt and pepper, then a layer of boiled potatoes and immediately after pieces of boiled beef, covered with butter, salt and pepper. The pot is then placed on the fire, and when cooked we withdraw a sort of a stew.

Pies are allowed if cooked in water and slightly scraped from the pan, so as to leave behind the burnt parts.

Among the side dishes enter the inverted creams, corn starches, custards and puddings. For desert, cheese, and stewed fruits should be served. Dry fruit should be prescribed.

For drinks, red wine mixed with water should be allowed; it contains iron and tannin, or beer (a wine glass of malt beer to a glass of ordinary beer). We may allow 1 gramme of alcohol for kilogramme of weight.

We should forbid fats, cooked butter, table sauces, game, overkept meats (*viandes faisandees*), preserves, blood pudding, sausages, scrapple, with the exception of the lean of ham. Forbid also fat fishes (mackerel, salmon, eel, herring, carp), anything crude or acid (citron, vinegar), and dry fruits, excepting raisins.

Fatty substances and alcohol are more suitable in winter, but individual taste should always direct the choice of food.

A half an hour's walk before meals is beneficial, and an hour and a half to two hours' rest after meals is equally helpful, and if there is no fever a carriage ride will always be favorable. But if fever is present the rest must be absolute.

SMALL DOSES OF QUININE IN MALARIAL FEVERS.—It has been the rule, says Dr. M. Nocht, Prof. of the school for the study of tropical diseases, in Hamburg, to give *quinine* between the attacks of the fever, and to give it in massive doses. But I can speak with entire confidence of an entirely different manner of administering this drug with good effects. The good results have been recently obtained in warm countries where the abuse of *Quinine* has been always alarming. The mode of administration consists in given repeated small doses, no matter at what period of the fever, during the attack or during the apyrexias. This eminent authority has found that they give at least as good results as the heavy doses given at long intervals, while with them we avoid the bad consequences frequently observed; a very important matter particularly with cases in which the drug is badly tolerated.—(*Deutsche med. Woch.*, March 25, 1909.)

LYCOPodium NOT AN INERT DRUG.—This is the opinion of an allopath, who is frank enough to admit a great truth. *Lycopodium*, says A. L. Noussel, in the *Druggists' Circular*, is by no means so inert a drug as usually supposed. It has probably acquired that reputation from the fact that the active principles are encapsulated within the spores and, therefore, not easily removed by solvents, unless the powder is first properly disintegrated. (*Why not say triturated*). "It produces marked effects even in small doses, the action on the respiratory organs producing effects similar to hay fever." "It is useful in eliminating excess of uric acid, and in affections of the respiratory and urino-genital organs." "It fully deserves the place accorded to it by homœopaths and eclectics as an active drug." What do our incredulous materialists think of this?

MAGNESIA SULPHURICA IN EPILEPSY.—Dr. W. J. Maguire, of England, had the idea of experimenting with *Sulphate of Magnesia* to ascertain its action on the comitial malady, taking into account the local anæsthetic properties which has been recently ascribed to this drug. His trials were followed by good results, and he became convinced that the *Sulphate of Magnesia*, methodically administered, 4 gr. daily, could calm severe attacks of epilepsy, thusly avoiding the employment of *Bromides*, the inconveniences of which are so well known. Dr. Maguire has now adopted the following plan for the treatment of epilepsy. Appropriate diet, methodic occupations, muscular exercises, sulphate of magnesia, and if necessary bromides.—(*Bulletin Medical*, Ap. 10, 1909.)

NOTES OF A PHYTOLACCA CASE.—W—, æt. 19, in the year 1878, was sent home from a West End hospital as a hopeless case of albuminuria, after several weeks of orthodox treatment. My father, the late Dr. Charles T. Pearce, M. R. C. S., Eng., and I visited the poor patient. The dropsy was fearful. I wished to try phytolacca, as I had seen good effects from its administration in cases of albuminuria while assisting for seven years a homœopathic practitioner in the North of England. My father consented, saying that the case seemed almost hopeless, and if no improvement were shown within forty-eight hours we must either stop the phytolacca or alternate it with another remedy. Five-minim doses of the first decimal tincture were given every two hours. The cure effected by this valuable remedy alone was rapid and almost marvellous.

In Hering's *Condensed Materia Medica*, published in 1877, the following symptoms were given: "Urine: albuminous, scanty," &c. I have found phytolacca very useful in cases of dropsy following scarlatina.—By Alfred J. Pearce, *The Homœopathic World*.

Supplementary to this is the following from Dr. Wm. Boericke, in January, 1910, *Medical Century*: I have found small doses of the mother tincture of phytolacca, or of low dilutions, very useful in cases of constipation in aged patients, of those of very weak constitutional powers, with weak heart action, intermittent pulse and generally relaxed muscular frame.

THE HAHNEMANNIAN MONTHLY.

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TUBERCULOSIS.

BY

JOSEPH C. GUERNSEY, A. M., M. D., PHILADELPHIA.

(Read before the Clinico-Pathologic Society of Philadelphia; Also before the Germantown Medical Club, of Philadelphia.)

"Every three minutes someone in the United States dies from Tuberculosis."—*The Survey*, February, 1910, p. 776.

"One out of every three persons dying during the time of life that should be of the greatest productive energy dies of tuberculosis."—Professor William H. Welch, M. D., Johns Hopkins, *The American Review of Reviews*, September, 1908.

PART FIRST.

THE discovery of the tubercle bacillus by Koch, was announced August 10, 1882. This bacillus, a vegetable organism and rod shaped, had long been searched for; but its small size, being only one 10,000th of an inch long, requiring a magnifying power of 500 times for its discernment; and its *transparency under the microscope*, caused it to be overlooked. Dr. Koch's "discovery" consisted in devising staining fluids, one of which colored (red) the bacilli but not their surroundings; thus rendering the bacilli visible.

In July, 1901, at the London Congress of Tuberculosis, Dr. Robert Koch stirred the scientific world by announcing that tuberculosis, seen in animals, was entirely different from that of mankind; and that it is impossible to transmit the human disease to cattle. He held that if human beings ever were infected

from cattle it was a very rare occurrence, so rare indeed that it could practically be ignored.

The immense and forcible array of testimony that has accumulated during the eight years since the promulgation of this theory, to my mind, wholly controverts Koch's conclusions. Time and space will not allow me to present all the testimony upon the subject, but I will state as briefly as may be, some of the authority we have for disputing Koch's assumption.

The American Review of Reviews, for May, 1908, in an editorial, entitled "What Medicine Owes to Robert Koch," says: "Dr. Koch, strange to say, at present holds that tuberculosis in man is a disease distinct from tuberculosis in cattle and other lower animals, and he denies the possibility of the transmission of the disease from these animals to man. The great majority of the medical profession, however, now holds to the contrary view."

Dr. Edward R. Snader, our late esteemed Professor of the Practice of Medicine in Hahnemann Medical College of Philadelphia, wrote me: ² "I believe Koch was altogether wrong in his assumption that bovine tuberculosis is not communicable to man."

Dr. Edward W. Watson, a prominent physician in Philadelphia, who has devoted many years to careful study of the subject, has written me a letter which he pithily and forcibly sums up in these four words: "No cow; no consumption."

Dr. Samuel G. Dixon, Commissioner of Health of Pennsylvania, writes ³ me as follows: "After having produced tuberculosis in many of the lower animals by injecting tubercular bacilli from human economy and having taken bacilli grown in those lower animals and reproduced it in cattle, and having carried on the same experiments with the bovine tubercular bacilli on the same line of animals, I am thoroughly convinced, by repeated experiments, that there is only a difference in their virulence, and, therefore, I cannot agree with Professor Koch that bovine tubercular bacilli do not produce tuberculosis in the human economy."

I received a letter (written May 6, 1908,) from E. C. Schroeder, M. D. V., Superintendent of Experiment Station, Bureau of Animal Industry, Washington, D. C., in which he wrote: "The evidence supplied by the Federal Bureau of Animal Industry, the British Royal Commission of Tuberculosis, and a host of independent investigators, all point to the con-

clusion that Dr. Koch is wrong in his view that bovine tuberculosis is of little or no importance to public health. My own belief to-day is that we have two great sources of human tuberculosis; tuberculous or consumptive persons and dairy products from tuberculous cows. . . . The latter certainly cannot be ignored, especially as tubercle bacilli from bovine sources are usually more virulent for all species of animals . . . than tubercle bacilli from human sources."

In July, 1901, at the London Congress on Tuberculosis, Dr. Robert Koch presented his theory of the non-communicability of bovine tuberculosis to the human race because he thought he had discovered that bovine and human tuberculosis were different diseases. Earlier than this, however, in 1896, Theobald Smith had called attention to some differences between bovine and human tubercle bacilli so that Koch was not the first in this field of investigation. Proofs are at hand from 1896 to 1904 that bovine tubercle bacilli were, *as they still are*, transmitting the fearful tuberculous scourge to men, women and children; but I shall now only consider this question of transmission as introduced by Koch and endeavor to show whether his conclusion was true or false.

No one in our country is a higher authority on the subject, and probably no one has labored more diligently, more skillfully and more successfully in demonstrating the *incorrectness* of Koch's deductions in the relation of human and bovine tuberculosis than Dr. Mazyck P. Ravenel, formerly lecturer and demonstrator of bacteriology, Veterinary Department, University of Pennsylvania; also bacteriologist of the State Live-stock Sanitary Board of Pennsylvania, and now connected with the Department of Bacteriology and Hygiene in the University of Wisconsin.

I regret that the limits of this paper forbid my giving a full account of the experiments conducted by Dr. Ravenel and by his associates, under his supervision; because, conducted as they were with the utmost precision and care by scientific experts, they must carry conviction to all seekers after the truth of this momentous question. Working in conjunction with his able colleague, the late Dr. Leonard Pearson, they went into the investigation more largely, more deeply, more thoroughly and with more precision than did Koch himself. Consequently their findings out-value the value of Koch's.

In an elaborate article on *The Intercommunicability of Hu-*

man and Bovine Tuberculosis, published in 1902, Ravenel draws this "Conclusion: The evidence at hand forces us to conclude that human and bovine tuberculosis are but slightly different manifestations of one and the same disease and that they are intercommunicable. Bovine tuberculosis is, therefore, a menace to human health. . . . The eradication of bovine tuberculosis is amply justifiable from a purely economical standpoint; viewed in its bearing on human health it becomes a public duty."

In the report of the committee of the Laboratory Section of the American Public Health Association, on *Bacillus Tuberculosis in Men and Animals*, presented in 1903, Dr. Ravenel, chairman, we read: "We consider that it has been positively proven that a certain number of persons, chiefly young children, meet their death through infection with the bovine tubercle bacillus, but the knowledge at hand does not enable us at present to define the extent of this danger."

In a paper read before the New York Academy of Medicine, April 7, 1904, Dr. Ravenel refers to The German Tuberculosis Commission as follows:⁴ "When a commission which is evidently doing its best to sustain Koch has to acknowledge that twenty-five per cent. of the children examined by it show lesions due to the bovine tubercle bacillus, it seems time to abandon the doctrine that tuberculosis of cattle has little or no effect upon human health. It appears that the case might well rest on the positive evidence afforded already by the discovery of the bovine germ in children."

Two weeks later, in a paper read before "The Canadian Association for Prevention of Consumption and other Forms of Tuberculosis," Dr. Ravenel says this:¹ "Within the last two years very conclusive proof of the identity of bovine and human tubercle bacilli has been given in the work of von Behring, Pearson and Gilliland, Thomasson, Nocard, Neufeld and others, including especially The Royal British Commission on Tuberculosis. It has been shown by these workers that cattle can be rendered immune to bovine tuberculosis by injections of small doses of the human bacillus. All of our studies go to show that the production of immunity is specific in its character; that is to say, it is possible to immunize an animal against a certain disease only by a vaccine which is related closely to that disease. Hence, it follows that it would be impossible to immunize cattle against bovine tuberculosis, by inoculation,

with the human bacillus, unless these two organisms were essentially the same." (Homœopathy: *Similia similibus curantur.*)

In regard to the transmission of tubercle bacilli from man to animals Ravenel says: ¹ "In spite of Koch's denial of all possibility of infecting animals with human tuberculous material, this has been done by numerous workers. The first of these was Chauveau, who, in 1868, succeeded in infecting young cattle by ingestion by intravenous inoculation, and by subcutaneous inoculation. In 1870, E. Klebs reported experiments in which he had produced tuberculosis in animals by feeding tuberculous material from man as well as from animals, showing thereby the identity of the diseases. . . . Bollinger, in 1879, was the next to succeed in infecting cattle with the human bacillus. Other successful experimenters, Crookshank, Kitt, Sidney, Martin, Thomasson, Nocard, De Jong, Arloing, Westenhoffer, Max Wolff, Schottelius, Febiger and Jensen, Hamilton and Young, and at the laboratory of the State Livestock Sanitary Board of Pennsylvania we have succeeded a number of times in the same thing. To mention only one of these experiments . . . nineteen calves were inoculated by different methods with human material; fifteen of these developed tuberculosis, while only four resisted. The diagnoses in the cases of these animals were made by macroscopic as well as microscopic examination and also by re-inoculation of guinea pigs from the tissues."

At the end of his "Report on the Comparative Study of Various Forms of Tuberculosis," presented before the International Congress of Tuberculosis, Paris, October, 1905, after narrating the many experiments with tubercle bacilli conducted with the utmost precision by himself and others, Dr. Ravenel draws six conclusions. I quote the last two: "5. The bovine tubercle bacillus has the power of invading the human body and producing the lesions of tuberculosis. 6. We are at present unable to state the exact proportion of cases in which bovine tuberculosis is transmitted to man, but in view of the evidence at hand we must regard the disease in cattle as the source of a certain part of human tuberculosis, and any relaxation in our laws and precautions against bovine tuberculosis would be most unwise."

The comparative *virulence* of human and bovine tubercle bacilli is not only of interest but of importance in this connec-

tion. Until 1901, it was generally accepted by the medical profession and by the laity that "consumption was consumption" whenever and wherever found in the animal creation—brute or human. In 1901, however, the public proclamation of Koch that the tuberculosis of cattle was harmless to man, stirred the scientific world to elaborate and careful experiments as to the truth of this assertion.

It is now fully admitted that there is a bovine tubercle bacillus (*typus bovinus*) and a human tubercle bacillus (*typus humanus*)¹⁸—and oft-repeated observations have revealed the fact that the bovine tubercle bacillus is far more virulent than the human tubercle bacillus. Says Ravenel:⁵ "Accepting it as proven that the bovine tubercle bacillus has . . . considerably greater pathogenic power than the human bacillus for a large majority of experimental animals, is it fair to conclude that this increase of virulence will hold good for man also? Until the contrary is proven . . . it is, in my judgment, right that this conclusion be held. . . . The question can be determined definitely only by direct inoculation of man."

Particularly is the virulence of the bovine bacillus in evidence in the case of young children.

While the lung is by far the favorite location of tuberculosis, yet among the papers presented at the Sixth International Congress on Tuberculosis, held in Washington, 1908, is shown the universal dissemination of tuberculosis throughout the human system:⁶ Retroperitoneal Tuberculous Glands; The Acute Forms of Abdominal Tuberculosis; Tuberculosis of the Conjunctiva; Tuberculosis of the Cornea; Tuberculosis of the Larynx; Tubercular Disease of the Middle Ear; Tuberculosis of the Nose, Mouth and Pharynx; Tuberculosis of the Cervical Lymph Nodes; Tuberculosis of the Vas, Epididymus, and Testis; Tuberculosis of the Bladder; Tuberculosis of the Kidney; Tuberculosis of the Urinary Tract; Tuberculosis of the Female Generative Organs; Tuberculosis of the Peritoneum; Tubercular Arthritis of Hip Joint; Tuberculosis of the Bones and Joints; Tuberculosis of the Muscles, Tendons, and Fascia; Tuberculosis of the Stomach, Liver, Gall-Bladder and Pancreas; Tuberculosis of the Breast.

In the "Special Volume" of the Congress we find a paper on Tuberculosis of the Heart, of the Blood and of the Lymph Vessels.

We are acquainted with Tuberculosis of the skin—and, in short, we know of no part of the body that is free from the invasion and ravages of tubercle bacilli.

The etiology of tuberculosis being instructive as well as interesting, I will quote from a paper on the subject ⁷ by Dr. Ravenel:

“The possibility of tuberculous infection through the digestive tract appears to have been first pointed out by Klenke, who, in 1846, gave the clinical histories of sixteen children who had been nourished on cow’s milk, all of whom showed tuberculous lesions of the intestines, glands, skin or bones.

“Chauveau, in 1868, published the first experiments proving the possibility of tuberculous infection through the alimentary canal. Further successful experiments were reported by him in 1872 and 1873, establishing at this early day, for cattle at least, the important rôle played by ingestion in the transmission of tuberculosis.

“Villemin, in 1869, published confirmatory experiments.

“Gerlach began experiments in 1866, continued them in Berlin on a much larger scale and gave the strongest support to the work of Chauveau. He was the first to prove that animals could be infected by the ingestion of the milk of tuberculous cows.

“In 1870, E. Klebs reported experiments in which he had produced tuberculosis in animals by feeding tuberculous material from man as well as from animals, showing thereby the identity of the diseases. In 1873 he extended his experiments, employing tuberculous milk with positive results.”

It has been thoroughly proved that the tubercle bacillus is able to penetrate the mucous membrane of practically the entire alimentary canal, as well as that of other parts of the body.

“Tuberculosis of the *mouth* and *tongue*, *palate* and *gums* is rare, even as a secondary manifestation in advanced phthisis, when all the parts are constantly exposed to large quantities of sputum containing myriads of tubercle bacilli.

“The *tonsils* have long been believed to serve as portals of entry for the tubercle bacillus. They are often the seat of primary tuberculosis and their susceptibility to tuberculous infection is shown by the examination of persons who have died of consumption. Grober states that infection through the tonsil is the most frequent origin of apical tuberculosis. His experiments have demonstrated that from the cervical glands there

is a direct route to the pleurae and lungs leading especially to that portion of the lung most frequently the primary seat of tuberculosis—the apex.

“Tuberculosis of the *pharynx* and *oesophagus* is extremely rare and, as a primary affection, is practically unknown.

“Tuberculous disease of the *stomach* is one of the rarest forms seen, and the cause of this apparent immunity is attributed to the protective action of the hydrochloric acid of the gastric juice.” Another explanation is that “milk has a . . . safeguard within itself, for *lactic acid attacks and kills the bacillus of tuberculosis*. This lactic acid is produced in the process of digestion from the fermentation of the sugar of milk.” This fact is claimed to have been proved by Charles H. Gage, in his laboratory in San Francisco.¹⁹

The *intestine* is very frequently attacked with tuberculosis, the autopsy reports of various pathologists giving figures that run from 30 per cent. to 90 per cent.; the intestines of children are far more frequently attacked than of adults. In the great majority of intestinal infection the lesion is unquestionably secondary. It is believed by many pathologists that the tubercle bacillus is able to penetrate the normal mucous membrane of the intestine without leaving any lesion at the point of entrance. Orth, in 1879, and Cornet, in 1880, observed bacilli pass step by step through the fully developed mucous membrane of the uninjured intestine and reach the lymph channels and mesenteric glands, leaving no recognizable trace behind.

⁸ “It is an established and generally admitted fact that tuberculosis is more commonly an affection of the *lung* than of other organs or structures of the body. In a recent publication of the Bureau of Animal Industry, Bulletin No. 86, experimental evidence was presented to support the conclusion that this relatively greater frequency of pulmonary tuberculosis is *not due* to the more direct exposure of the lung to infection that reaches it from without, suspended in the respired air (such as dried sputum) but to the more direct exposure of the lung to infection that may have entered the body in any way and has reached the lymph channels and through them the blood stream.” To obtain further information on this subject three hogs and one calf received subcutaneous injections of virulent tubercle bacilli. The place of injection was the tail of each animal as near the extreme end of it as possible—as

being, first, the farthest removed available portion of the body from the lung; second, also a location from which lung infection seemed least likely to occur.

The three hogs and the calf promptly contracted tuberculosis and the post mortem examinations showed most extensive lesions of the lung in every case. "We are justified in concluding that one of two courses was taken by the bacilli to reach the lung. (1) They were taken up by the capillary blood vessels and carried to the lung directly with the venous blood stream; or (2) they were taken up by the lymph radicals, passed along the lymph channels by or through the lymph glands, entered the great thoracic duct and through it were poured into the venous circulation."

That tubercle bacilli can do as just stated, in (2) the preceding paragraph, has been abundantly proven and the practical conclusion from the results obtained is just this: Ingestion is a greater danger than the respiration of tubercle bacilli, especially as the tubercle bacilli may be ingested in the fresh state in which they are expelled from tuberculous lesions.

Dried, pulverized sputum has long been regarded as the most prolific and important agent for the spread of tuberculous infection; but now we learn from the investigations of Cadéac,⁹ and several others, that the supposed transmission of tuberculosis by inhalation of the dust from dried sputa has not been proved. They found that expectorated matter dries slowly and is neither simple nor easy to convert into dust; and further, exposure to sunlight kills the bacilli as is proved by the fact that sputum spread on a porous plate and exposed to sunlight was not effective for inoculation after 48 hours—but, when dried in the dark, some virulence remained.

Still later, after further and more convincing experiments Cadéac writes as follows:¹⁰ "The dust ground from dried tuberculous sputum is harmless. . . . Not a single experiment has shown the transmission of tuberculosis by the inhalation of dust gathered from localities inhabited by tuberculous patients." On the contrary, indeed, "The desiccation and rapid conversion of sputum into flying dust are the natural means of preservation against tuberculous infection."

"We¹¹ gather from these various facts that *too much importance* has been given to dried and pulverized, and NOT ENOUGH to fresh and moist tuberculous material. The respiratory theory, to account for the relatively great frequency

with which tuberculosis is localized in the lung, really requires dried and pulverized sputum to give it a reasonable footing and, if pulverized sputum is shown to be inert,—the *theory has nothing left to stand on*. With the respiratory and inhalation theory shown to be unnecessary to account for the infection of the lung, fresh and moist tuberculous material must be given a place of primary importance; and exposure to it must be persistently avoided and regarded as the exceptionally great danger. This cannot be too much emphasized.”

PART SECOND.

THE UNSUSPECTED BUT DANGEROUSLY TUBERCULOUS COW.¹²

During the last few years a vast amount of scientific work has been done in original investigation at home and abroad, in the attempt to discover the source of tuberculosis.

A. It is known that “The primary cause of tuberculosis is the tubercle bacillus. Without this germ, tuberculosis cannot exist. . . . The tubercle bacillus is as strictly essential to the development of the disease tuberculosis as a seed is for the development of a plant.”¹³

B. There are certain points of distinction between tubercle bacilli from man and from cattle, which justify their being classed as two races or types; they are called *typus humanus* and *typus bovinus*. The human bacilli are twice as long as the bovine, more slender and are often curved and beaded (due to degenerative changes). They are characterized by the fact that they grow rapidly and abundantly in a thick layer on glycerin serum.

The bovine bacilli are short, straight, plump and without beading. They grow very slowly and in a thin layer on glycerin serum. The fact that the bovine bacillus has been found in cases of human tuberculosis proves that we are not immune against the “dangerously tuberculous cow.” I quote freely from a recent¹³ Report on the *Unsuspected but Tuberculous Cow*, by Schroeder, that we may realize how great a source of danger exists in this intimate friend of the human race, especially in the period of its babyhood. “The dangerously tuberculous cow is an animal that is expelling tubercle bacilli with her milk, urine, feces, saliva or otherwise, in such numbers and with such frequency that their presence can be certainly detected.

"Examinations show that the commonest way in which tubercle bacilli pass from a tuberculous cow is with her feces . . . and they were found many times in the feces when they could not elsewhere be detected.

"After several hours of sedimentation, 121 of 172 samples, *i. e.*, 70 per cent. of the kind of milk that reaches the city consumer, showed a visible deposit of dirt which, on microscopic examination was found to be made up, in part, of fecal matter; and we are now in a position to say that the presence of cow feces in milk is *prima facie* evidence that the milk, when obtained from a tuberculous dairy herd, contains pathogenic bacteria." A cow of average size passes about 30 pounds of feces each day. If this mass were spread on cover-glasses it would be ¹⁶ sufficient to make 6,300,000 preparations which, allowing six bacilli per cover-glass, the average number found in the feces of a tuberculous cow, would contain 37,800,000 microscopically demonstrable tubercle bacilli daily from a tuberculous cow—and there would be millions more present but not seen. Dr. Schroeder uses an adjective in his title, which is needed to express his ideas. He says: "The *Unsuspected but Dangerously Tuberculous Cow*" and in exemplification of his adjective (*unsuspected*) he writes:

"The Dangerously Tuberculous Cow long after she has become dangerous, may continue to look and act like a healthy animal. She may not show any symptoms of disease nor discomfort; her appetite may be good, and she may conceive, calve and milk like an ordinary cow. Sometimes, but not always, she has a slight, infrequent, easily overlooked cough. A dangerously tuberculous cow may actually be in prime, fat beef condition." Confirmatory testimony of this is found in the Iowa Health Bulletin (March, 1908) in an article entitled, "The Disposition of Tuberculous Cattle," by Dr. G. A. Johnson, Government Inspector, Sioux City, Ia. His words are: "It is a peculiarity of tuberculosis that extensively diseased animals may, and often do, appear to be perfectly healthy and it is this peculiarity which makes the handling of the disease such a difficult problem; *i. e.* The great difficulty in dealing with tuberculosis lies in the fact that most men cannot understand or will not believe that an animal that eats and drinks heartily, that looks and acts as if healthy, that grows and takes on flesh readily, can be seriously diseased—but, animals apparently healthy are *often* tuberculous." When the raiser of

stock realizes this fact, the control and weeding out of diseased animals will be more easily accomplished.

Right here let us remember that every word of the foregoing, in reference to the "unsuspected but dangerously tuberculous cow," is equally true of the unsuspected but dangerously tuberculous human being! Many a fine looking man or beautiful woman, ruddy of complexion, hearty of appetite, strong of digestion and apparently in the possession of sound health, has in reality a system already permeated with tubercle bacilli. We know that eminent athletes, both amateur and professional, of heavy muscular frame and vast powers of endurance often die of consumption. Intimate association with tuberculous persons is so highly dangerous that the same bed should not be shared; the loving kiss should not be given nor received; the same towels should not be used nor the same clothing worn; food should not be shared with the same eating utensils nor should the same tumbler nor cup be used from which to drink—in short there must be no contact of any kind between a person affected with tuberculosis and one unaffected. Says Johnson: "The first essential step in any plan looking to the control of tuberculosis is its correct diagnosis. With our present knowledge there is but one accurate method for diagnosing the disease in the live animal, and that is the tuberculin test which, when properly used, is one of, if not the most accurate diagnostic agent known to medical science." Says Schroeder: "After years of observation the tuberculin test has been found to be a more nearly infallible means for diagnosing tuberculosis than we have for diagnosing other diseases of men and animals. Our dairy herds can be cleaned of tuberculous cows by the proper application of the tuberculin test and the segregation of all re-acting animals."

A most interesting confirmation of the value of tuberculin and segregation was told me (April 13, 1908,) by Mr. Arthur Erwin Brown, secretary and general manager of the Zoological Society of Philadelphia. I said to him: "When visiting a zoological garden one finds the greatest number of visitors crowding around the monkey cage. Monkeys are such notoriously tuberculous animals that their feces, urine and saliva dropping upon the floor of their cage must make it a prolific source of tuberculosis."

Mr. Brown replied: "That was formerly true, but now the safest place to visit is the monkey cage. We formerly lost by

death from tuberculosis 30 to 40 monkeys each year; last year only three of our monkeys died from that disease."

I asked, "How did you obtain such successful results?"

He replied: *First*. "We apply the tuberculin test to every monkey that now comes to us and keep it under observation at the Pathological Laboratory. If it show the 're-action' we never allow it to enter the general monkey cage for exhibition. *Second*. We keep a close watch upon all the monkeys in the cage, and if any one cough or show any suspicious sign of tuberculosis, he is immediately segregated to the Pathological Laboratory, *including all the monkeys who were in the cage with him*. Thus we have in round numbers reduced the tuberculous mortality of our monkeys from 20 or 30 per cent., to about 3 per cent." Since such good results are obtained with tuberculous monkeys, equally good results are obtainable with tuberculous cows.

We are now living in an age that eliminates every animal proven guilty of conveying pestilence and disease. Medical journals and daily newspapers, weekly periodicals and monthly magazines, scientific serials and religious publications unite in the cry: "Depart from us, ye that cause sickness and death." We must eliminate the mosquito, because he brings to us yellow fever and malaria; the rat must go because in him grows the bacillus of the Bubonic plague; and his active helpmate, the tiny flea, must be destroyed because it absorbs the plague from the rats and transfers it and other diseases to human beings—thereby slaying its millions; the house-fly must be banished because he conveys typhoid fever and a host of other ills; the horse must be driven from the haunts of man because his dung, whether piled up in the reeking manure pit or scattered along the city's streets, breeds flies and other insects which spread sickness and death; lately there is a demand for the extinction of the cat as an infecting agent of diphtheria, scarlet fever, tuberculosis and other diseases; and finally, evidence is rapidly accumulating which will yet divorce us from the tuberculous cow!

Mr. Brown told me another interesting and suggestive experience of the Philadelphia Zoological Garden with an "unsuspected but dangerously tuberculous" *bull*! He said: "A few years ago we found our little herd of buffalo suffering for want of a new 'strain,' We obtained a fine looking, handsome young buffalo bull but he proved to be tuberculous and in-

fected our buffalo cows. To stamp out the disease we were obliged to kill four of our little herd." We are again, by this anecdote, compelled to remind ourselves of the many "fine looking and handsome" young men and young women whom we are daily meeting in intimate association, but who are infected with that dread disease—The White Plague.

"Tuberculosis is so common among cows that milk producers frequently assert that a milk famine would result if the tuberculin test were applied to all dairy cattle and if all those reacting were condemned for dairy purposes. *We know* that about 40 per cent. of all cows that react to the tuberculin test, though retaining the appearance of health, are actively passing tubercle bacilli. *We know* that the commonest mode for tubercle bacilli to be expelled from a tuberculous cow is with her feces and it has been demonstrated that the bacilli contained in the feces of tuberculous cows are alive and virulent. *We know* that tubercle bacilli are ¹⁴ "more frequent in butter than in milk; . . . that butter probably contains tubercle bacilli in discoverable numbers 13 times for every 10 times they are sufficiently numerous in milk to be detected." *We know* by experiments, that "butter is an ideal environment for the preservation of tubercle bacilli." (4) ¹⁴ In ordinary salted butter they remain alive and virulent a long time; after ninety-nine days they show only a doubtful reduction of pathogenic virulence. (7) ¹⁴ Unimpeachable evidence proves conclusively that tubercle bacilli of the bovine type, from bovine sources, must be classed as highly infectious for man; hence, tubercle bacilli in butter cannot be ignored.

Drs. Herr and Beninde, ¹⁵ two German investigators, ascertained from their work that skim milk, buttermilk, cream, butter and the sediment from infected milk contained tubercle bacilli and that the most intensely infected of these substances are butter and the milk sediment. Among 444 samples of butter tested by them and other investigators, 60, or over 13 per cent. were found to contain tubercle bacilli.

Broers, ¹⁵ of Utrecht, says the milk of his country contains 10 per cent of tubercle bacilli, and he shows that they may be present in skim milk, cream, buttermilk and butter, retaining their virulency a long time.

In a personal letter (May 6, 1908,) Dr. E. C. Schroeder ¹⁶ wrote me: "We should always bear in mind that bovine tu-

bercle bacilli are in milk, cream, ice cream, butter, cheese, oleo-margarine."

To many people it may seem strange, if not actually untrue, to speak of the dangers of tubercle bacilli in ice cream because of the widespread (but wholly erroneous) idea that cold kills disease germs—and I will momentarily swerve from my immediate subject to touch upon this matter.

That even most intense cold does not kill bacteria is a fact well known to scientists, and an article entitled "The Resistance of Bacteria to Cold,"¹⁷ gives valuable instruction on this point, as follows: "The temperature of liquid air is 312° F. below zero. Experiments were tried with anthrax spores, with cultures of diphtheria, with cultures of the typhoid fever bacillus and the bacillus prodigiosus. The anthrax spores were suspended in the liquid air for three hours; the diphtheria bacillus for 30 minutes; the typhoid bacillus for 60 minutes; the prodigiosus for 60 minutes. In no case were the bacteria killed—all cultures from them growing *as rapidly and as vigorously* as the controls! And further, after an exposure to cold of 70° C. below zero continued for 108 hours and 130° C. below zero for 20 hours, it was found that anthrax spores retained life and virulence undiminished." That a moderate degree of cold, such as ordinary freezing cannot be relied upon to destroy infection has amply and often been proven. Says Ravenel: "I think it may be safely said that . . . cold cannot be relied upon as a disinfectant. In spite of the extravagant claims made for liquid air as a germicide it is, as such, practically innocuous." In a letter to me (May 9, 1908,) Dr. Ravenel writes: "The tubercle bacillus will resist extreme cold for a considerable length of time. I cannot put my finger on the authority for this statement, but can guarantee its correctness."

In truth, from the cradle to the grave we are at all times in the shadow of and are often stricken down with the omnipresent, omnipotent, ceaseless activity of the "White Plague," which cause a yearly death rate greater than *all* the other contagious diseases together and which until yesterday, has been allowed to run riot—practically without hindrance. Do you think I am dealing in hyperbole or indulging in fairy tales? Let us look at the cold facts of scientific research to prove my assertion.

Dr. Albin Burkhardt,¹⁵ after the examination of 1,452 hu-

man cadavera found that 91 per cent. showed lesions of tuberculosis irrespective of the cause of death. Nägeli, from the examination of 500 cadavera, places the figure at 96 per cent., and Schlenker, from 100 examinations, makes it 66 per cent. Other able investigators have confirmed the above testimony. These figures appear overwhelming, and even at the lowest estimate are so staggering as to call for a halt that they may be considered. If we accept only the very lowest proportion, that of 66 per cent. of the human race being affected, it means that *every other person, and 16 per cent. besides*, whom we meet on the streets, in cars, in social conclave, at theatre and in church, are tainted with tuberculosis!

Schroeder says of these figures: "This is just what we should expect when we know that tubercle bacilli concealed in butter, milk, cream and other dairy products are systematically and regularly distributed in a way that insures their ingestion by persons wherever the sale of milk from tuberculous cows is permitted."

But if, to the arraignment, "Thou art tuberculous," milk, cream, butter and other dairy products plead "*Guilty*," let us remember that a far more forcible plea of "*Guilty*" must come from the immediate circle of those who are nearest and dearest to us. I mean that with the high percentage of affected human beings just quoted, we know that the father grafts tuberculosis upon his daughter and the mother upon her son; the husband imparts it to his wife and the sister to her brother; the ardent lover conveys it to his sweetheart and the devoted friend infects his loyal ally.

Nor is the above cycle of infection complete. We must still include those who though not of us are with us. I refer to our servants and immediate attendants from the tuberculous child's nurse who kisses, fondles and infects the hapless infant in her charge; the tuberculous cook whose exhalations fall upon our food; the loquacious barber whose busy tongue and open lips in too close approximation to your face or to mine, drops the infectious tubercle bacilli in our respiratory tract—but why proceed? Every one here knows how and when and where he is exposed to the ubiquitous tuberculous bacillus—for, after all, we human beings are more frequent and more deadly enemies to one another, than is the unsuspected but dangerously tuberculous cow!

In closing this paper I beg to submit the conclusions which

I feel we are justified in accepting as they are based upon reliable data supplied and supported by the most authoritative literature of the day.

First. Koch's theory has been proven untenable. The evidence supplied by the British Royal Commission on Tuberculosis, probably the most important authority in the world; by the Federal Bureau of Animal Industry; and by hosts of other scientific investigators in Europe and America have so utterly disproved it that Koch himself no longer defends his position with his former ardor. In short, concerning the intercommunicability of human and bovine tuberculosis there does not seem the slightest shadow of doubt. That there is such intercommunicability has been proved by bacteriologists and expert scientists in many parts of the world; and it has been done, so repeatedly, that the fact is now universally accepted.

The day of Koch's theory has not only passed but written on the wall of medical science concerning it, are the words "Mene Mene, Tekel Upharsin—Weighed in the balance but found wanting"!

Second, Tuberculous milk has beyond question been proved to be a large factor in causing tuberculosis in man. If we exclude the cow as a great source of tuberculous contagion, tell me where else can we find such an abundant supply of tubercle bacilli as in milk—and its products; where else can we find a medium with so wide a spread as milk—and its products; how else can we account for the tremendous mortality of little children whose only food is—milk; how else can we account for the fact that as they grow away from milk diet and live upon non-tuberculous food, their mortality rapidly decreases; and as a final and positive proof, how is it that in Germany where all milk is cooked (even as meat is cooked) far less bovine tuberculosis appears in the human race than in England, where the milk is used raw?

I know that in Japan, although but little milk is fed to young children that tuberculosis is about as common as in this country but I also know that in this country we have far better hygienic environment than in Japan. The American population, as a whole, possesses a higher standard of comfort than the Japanese, and it is able to afford better and more abundant and more varied and more wholesome food; also the American population is better clad and better housed. Were it not for

these facts, with our handicap of milk—and its products, our consumptive involvement would be greater than that of Japan.

The real question that comes to us is this: "To what extent do human beings, young and old, contract tuberculosis from bovine sources?" Ravenel says: "We cannot answer this question positively, but it probably exists to a large extent."

Schroeder recently said at Chicago: "I do not believe that tuberculous cattle are the only or even the most important source of human tuberculosis," but "it seems quite clear that from the bovine source alone a sufficient amount of tuberculous material is disseminated to account for the well nigh universal infection of persons with tuberculosis, implied by the autopsy figures of Nagel, Schlenker, Burkhardt and others."

The bacillus tuberculosis is enclosed in an albuminous envelope which is a protection that protects! The envelope is so *tough* and so *resistant* as to defy almost any agent to enter it. One may pound upon it with a sledge hammer or deluge it with bichloride in attempting to gain admission to its confines—but without avail. The only way to reach and kill the germ is to destroy the albuminous envelope which surrounds and protects it. For this purpose we use tartaric acid in combination with bichloride—the tartaric acid dissolves the envelope so that the bichloride can "get next" the bacillus and annihilate it.

Tuberculosis is not a hereditary disease.—Until recently, tuberculosis appearing in children of tuberculous parents was thought to be hereditary. Careful study positively shows all facts to be so against this idea that it may be stated positively that inheritance plays a very small part in the spread of tuberculosis. It is true, however, that the children of tuberculous parents are much more apt to become tuberculous than the children of healthy parents because their mutual relations are of the utmost intimacy. The children are constantly and closely associated with their diseased parents—often sleeping in the same bed and even in direct contact; eating from the same plate and drinking from the same cup; frequently caressing and kissing; using the same towels and wearing the same clothing, etc.

The whole question of "Tuberculosis" may be summed up in these two propositions:

First. We must protect each member of the community against the invasion of the tubercle bacillus.

Second. We must fortify each member of the community

against the disease when he is invaded by the tubercle bacillus.

To accomplish these two propositions we must live in the bright sunlight; inhale quantities of out-door pure air; secure perfect rest, bodily and mentally; eat abundantly of nourishing food; obtain plenty of sleep—tired nature's sweet restorer.

¹*Animal Tuberculooses and Their Relation to Human Health.* M. P. Ravenel, M. D.

²April 24, 1908.

³April 25, 1908.

⁴*The Influence of Bovine Tuberculosis on Public Health.*

⁵The Comparative Virulence of the Tubercle Bacilli from Human and Bovine Sources. Read before the British Congress on Tuberculosis, London, July, 1901.

⁶See Volume II, Section III, of its Transactions.

⁷*The Etiology of Tuberculosis*, 14th International Congress on Hygiene and Demography, Berlin, September, 1907. Ravenel.

⁸The Relation of Tuberculous Lesions to the Mode of Infection, Bureau of Animal Industry, Washington, D. C., Bulletin No. 93.

⁹Lyon Medical, December 10, 1905; British Medical Journal, March 10, 1906.

¹⁰Le Bulletin Medical, September 5, 1906.

¹¹*The Relation of Tuberculous Lesions*, &c., Bulletin, No. 93.

¹²By E. C. Schroeder, M. D. V., Circular 118, Animal Bureau, Washington, D. C.

¹³Commonwealth of Pennsylvania, Department of Agriculture, Bulletin No. 75.

¹⁴Bureau of Animal Industry, Washington, D. C., Circular 127, April, 1908.

¹⁵Zeitschrift, &c.

¹⁶Superintendent of Experiment Station, Bureau Animal Industry, Washington, D. C.

¹⁷By Mazyck P. Ravenel, M. D., *The Medical News*, June 10, 1899.

¹⁸Tuberculosis of birds is not considered in this article.

¹⁹"Tuberculosis Not Transmissible." *The Homoeopathic Recorder*, November, 1909.

PSYCHASTHENIA.

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IN the practice of medicine patients are frequently encountered who, while obviously suffering from nervous disease, possess symptoms and abnormal mental states which do not coincide, individually or as a whole, with our conceptions of those which are characteristic of hysteria, neurasthenia or insanity. The majority of these residuals, or borderlanders, almost invariably hereditary neuropaths, present a large number of symptoms which result directly from obsessions.

It readily can be understood that obsessions may give origin to an infinite number of types of deviations from the normal. Now, as a consequence of this mutability of expression, and before the complex of psychasthenia had been differentiated and recognized as a definite clinical entity, the different manifestations of this disease, when occurring apparently as isolated phenomena, were given various names and were dignified by being classified as new diseases; the discovery and description of phobias alone proceeded ad nauseam. This led to the formation of a great multiplicity of supposedly distinct psychoses, until it was shown, by Pierre Janet,¹ that these various conditions were merely symptoms of one definite and common disease which he named psychasthenia.

Formerly, psychasthenics were diagnosed as hysteria or neurasthenia; the more severe cases being considered as *dégénérés*, or even as insane. When tics occurred as a conspicuous feature the earlier French writers classified the cases under the collective term *les maladies des tics convulsifs*.

Even at present various well known neurologists are discovering new and peculiar psychoses; their descriptions being based upon patients who present unusual symptoms which, when subjected to critical analysis, are obviously the result of obsessions. Furthermore, the histories of these patients reveal

the typical mental "stigmata" of psychasthenia. In 1908, Isselin,² for example, portrayed attention neurosis as a disease in which patients were unable to perform an action while attending to its attempted execution. Writing, reading, talking, sleeping, etc., were mentioned, but one can conceive the similar involvement of any form of activity. This psychosis is, in reality, only the effect of fear and expectant attention; pathologic results of either of which may be symptomatic of hysteria, neurasthenia, or psychasthenia, and, therefore, the condition is of the same nature as astasia-abasia, akathisia, etc. The same interpretation might be applied to the recently described emotional chorea,³ and to graphic stuttering.⁴ This symptom, then, has its analogue in the well known interference which conscious attention may exert upon the performance, by a normal individual, of any more or less automatic act.

Before the underlying psychic mechanism of hysteria was recognized and generally accepted the same difficulty was experienced in this disease. It was a long time before the supposed disease astasia-abasia was conceded to be merely a form of motor expression of the pathologic ideation of hysteria. Now, however, one can readily comprehend how astasia-abasia could result also from the morbid expectant attention which is a component of psychasthenic fear of the condition.

Some American neurologists have not yet accepted psychasthenia as a clinical entity. Others have confused the subject further by advancing a different terminology. According to Dana's⁵ classification, psychasthenia, or psychataxia, comprised the so-called hystericals (not cases of hysteria) and phrenasthenia was the name applied to conditions characterized by obsessions. In 1907, George L. Walton⁶ grouped the different psychoses which are dependent upon obsessions under the general term psycho-neuroses, or obsessive psychoses. Dercum⁷ stated, in 1907, that when neurasthenia occurs in a patient who is a hereditary neuropath an obsessional state may develop which is the so-called neurasthenic insanity.

As the mechanism, symptomatology, and treatment of psychasthenia usually differ greatly from that of the other two great classes of functional neuroses, *i. e.*, hysteria and neurasthenia, it is of paramount importance to differentiate these conditions and to possess an adequate conception of each.

Apropos to the frequency of psychasthenia Lewellys F. Barker,⁸ in a commencement address, said: ".

among every ten patients entering your office door there will be at least one typical psychasthenic, I feel sure."

The two sexes are about equally affected; but those young females who are spoiled by the indulgence of parents and husbands and who are spared from having any of the duties and responsibilities of life with which to occupy their minds in a healthy manner, are particularly prone to develop the milder types of this, as well as the other functional neuroses. These individuals usually are designated by their associates, and sometimes even by their physicians, as foolish and impulsive, or hysterical women.

Though the disease may develop in children the elaborated and severe forms are but rarely encountered amongst them. In describing *les maladies des tics convulsifs* De Fleury⁹ states that the disease ordinarily begins in children of from five to twelve years of age, and that males are much more frequently affected. The comparative rarity of psychasthenia in American children is thought by Williams¹⁰ to be due to the self reliant manner in which they are brought up.

According to heredity, environment, and the influence of accidental stimuli, some forms of sexual perversion, kleptomania, criminality, and other types of degeneration, may appear as variations of this psychopathic state. Consequently, among the psychasthenics may be classified more properly a large number of the *dégénérés* and *déséquilibrés* of Morel,¹¹ Lombroso,¹² Nordau,¹³ Hirsch,¹⁴ and other Continental writers. As shown by his "Confessions," Jean Jacques Rousseau, for example, was a typical psychasthenic early in life and before he became actually insane. In his monograph on "Sexual Psychoses," Prince¹⁵ adduces arguments in favor of the belief that sexual perversion is the effect of cultivation, by hereditary psychopaths, and that it is not a congenital disease. The theory of sexual inversion does not seem to be supported by facts. He believes, further, that by cultivation of the abnormal effects of some accidental sexual association that which at first is perversity may become an obsession.

In the study of psychasthenia, as well as the other psychoneuroses, the most generally accepted hypothesis is the one which was advanced by Pierre Janet and which assigns the foundation of the disease to disintegration of personality. Hysteria is described schematically by him as consisting in the formation of two personalities—*dédoublement* of the person-

ality—while in psychasthenia the disaggregation is incomplete: the patient being directly aware of the existence of the split off, or dissociated, portions of his ego.¹⁶ Ernest Jones¹⁷ characterizes the disintegration of psychasthenia as molecular, in contradistinction to the massive or organized forms which occur in hysteria and in the most highly developed type of dissociation which is known as multiple personality. The presence of subconscious ideation in cases of multiple personality is well known, (Sidis,¹⁸ Prince,¹⁹⁻²⁰ etc.) and its occurrence in hysteria is so universally known that references are unnecessary.

We must not infer that dissociation *per se* is pathologic, for, as shown by Prince,²¹ isolated, dissociated states constantly occur under normal conditions. These differ, as he remarks, from the pathologic forms in that they do not become elaborated and synthezized with one-another to form independent automatisms, except during states of abstraction and as artifacts.

In common with others J. W. Courtney²² has pointed out, in his lucid and comprehensive treatment of the subject, that the innumerable symptoms of psychasthenia are the result of obsessions. Now, it is difficult to conceive the possibility of most forms of obsessional activity without adopting the theory of disintegration of personality. In fact, the large number of experiments which have been performed upon these cases together with the results of their psycho-analysis, practically affirm the truth of this assumption.

To describe the psychologic basis of manifestations of the different psychoses, John E. Donley²³ applies the name association neuroses, regardless of the type of the disease, to those cases which present symptoms whose origin is in conscious association of ideas. When the symptoms result from subconscious association of ideas the condition is called dissociation neurosis. It would seem that the pathologic associations of psychasthenia might be either conscious or subconscious, for cases in which the latter occurs are being reported frequently. Such patients consciously are not aware of the morbid association of ideas which is responsible for their manifestations, and the associations can be discovered only by means of some psycho-analytic method.

The origin of most cases of psychasthenia of acute development is in some distressing emotional experience, or succession of such experiences. Naturally the more numerous the

exciting causes the more varied will be the manifestations of consequential morbid ideation. If the original painful emotional experience was followed by commensurate motor expression it would seem that if any symptoms of psychasthenia developed their psychologic basis would be in conscious association of ideas. If, however, as a defensive precaution the emotional feeling and concomitant expression be suppressed from consciousness then it would be but natural to expect the consecutive phenomena, because of their origin in submerged memory complexes, to be due to subconscious association of ideas.

"Man tends to 'externalize' his psychic emotion," as Joseph Collins²⁴ pertinently remarked in discussing the theory of submerged memory complexes. If through voluntary suppression of the emotion because of its unpleasant nature, or of the memories of its cause, adequate externalization is prevented a nidus is formed in subconsciousness which may give origin to different morbid phenomena.

This theory, which we owe to Pierre Janet,²⁵ and its elaboration to Freud, Breuer, Jung, Bleuler, Riklin, etc., quite generally has been accepted as the explanation of the manifestations of the functional neuroses, and, furthermore, it has been demonstrated by Jung,²⁶ Brill,²⁷ and others, to be applicable to dementia præcox. Moreover, in the daily life of the individual the activity of normally submerged, or "forgotten," memory complexes has been shown, by Jones,²⁸ and Prince,²⁹ to be responsible for many of the actions which are thought to be due entirely to different motives. This apparent psychic anomaly is but a component of the normally dissociated states to which allusion already has been made.

The obsessions of psychasthenia, when arising from subconscious ideation, are analogous to the imperative ideas which compel a subject, after having been hypnotized, to execute a post-hypnotic suggestion which had been given to him during the hypnotic state. (Prince,³⁰ Fox³¹); and the analogy is rendered more complete through the patient's ignorance of the true origin of his obsessions.

All the manifestations of psychasthenia, as already intimated, are directly due to obsessions, and these, like the phenomena of hysteria, usually originate from painful submerged memory complexes of which the patient is not consciously

aware. The obsessions are expressed either as distressing mental states alone or in combination with motor activity.

It should be borne in mind that all compulsory motor activity, in this disease, is dependent upon morbid ideation; the patient being irresistibly urged to carry out the various pathologic impulses, however criminal they are or however repugnant they may be to him. He seems to be fighting continually, and perhaps unsuccessfully, against impulses which are foreign to his nature and which do not appear to him as having originated in his ego. This aspect of the subject has been compared to the ancient ideas of "possession."

No case could be chosen which is better fitted to serve as an illustration of these remarks than one which Ribot³² quotes from Calmeil. The patient, a boy of 16 years, developed an impulsion to kill his mother, though he loved her greatly, and this obsession dominated his mind to such an extent that he enlisted in the army, in order that he should not have any opportunity to commit matricide. Even in the army he constantly was impelled to desert so that he could accomplish the crime he feared so greatly.

Indeed, fear of perpetrating an abnormal act or crime may lead to its commission; notwithstanding its repulsiveness to the subject nor his conscious efforts of inhibition. The Rev. A. Kampmeier's case³³ was a very pretty example of this peculiarity. This man, a psychasthenic, after reading a book which dealt with the evil consequences of sexual irregularities ". . . became very chaste from fear of the horrible consequences of a lapse from virtue." After causing him much psychic distress his obsession led up to what best can be expressed in his own words: "My demon finally drove me to make true what I imagined would inevitably come about had I not read that book. I gave myself up to sexual excesses, not for the pleasure of them, since in my case this was impossible, but to make true what I thought would have been my fate."

In almost the same manner some varieties of kleptomania, too, may be originated. This symptom—kleptomania—when of psychasthenic derivation, is but the result of submission to irresistible impulses to steal; the patient being fully aware of the significance and consequences of his act and suffering great mental distress on that account. The condition begins in casual fear of stealing and terminates in the obsession to steal; even though the individual may have no use for the articles

which are thus acquired, and even though he may be a man whose wealth places him far above the necessity to steal. The acquisitive impulses often are systematized so that only one kind of objects are appropriated. Interesting ontogenetic and phylogenetic interpretations no doubt could be made in the attempt biologically to explain this phenomenon. The true nature of the condition can be recognized only by discovering other evidences of psychasthenia and by careful consideration of the motives for the act.

If the morbid impulses to any form of mental or physical activity are resisted by the patient the greatest mental suffering develops and may continue in a cumulative manner until the acts are accomplished, or, perhaps, until his attention is distracted.

The habitual introspection which is characteristic of psychasthenics causes them to become ego-centric to the highest degree. Severe cases are so pre-occupied in attending to their psychically elaborated coenesthesia, in analyzing their mental states, and in resisting their obsessions, that there is not any opportunity to observe regard for others.

The anxiety of the psychasthenic over his obsessions and their motor expression is the antithesis of the manner in which symptoms are regarded by a case of the rarely encountered *pure* hysteria. Such a patient,—one in whom the disease is not contaminated by admixture with manifestations of neurasthenia or psychasthenia—is entirely devoid of serious inconvenience or apprehension over what appears to be a grave symptom: hemiplegia or amaurosis, for example.

Tic convulsif, or *tic obsessif*, a familiar form of compulsory motor activity, may occur as the sole motor manifestation of psychasthenia, and it may appear, to the superficial observer, as though it were an isolated phenomenon. Careful inquiry, however, almost invariably will reveal the existence of phobias, and other symptoms of psychasthenia.

The imperative ideation which causes these tics, or "habit spasms," is disposed to be most insistent when the spasms are least desired. When in the company of friends, and more particularly strangers, the patient fears that he will be afflicted with his tic, and, being ashamed of it, he apprehends having remarks made about his condition. The consequent state of expectant attention naturally results in the production, or the aggravation, of the tic.

The psychic nature of the psychasthenic tic further is indicated by the absence of the tic during distraction of the patient's attention, and by the fact that some of these patients do not have their tics when alone, or, to express the condition more correctly do not have any tendency to tique when alone.

By exerting great efforts the patient, when in company, may be able, more or less successfully, to resist the impulses until he thinks himself unobserved. Then he indulges in the gratification afforded by a number of quickly repeated spasms which appear, to the chance observer, as if the impulses had been accumulating, or as if the *tiqueur* was attempting to insure a succeeding interval of respite, by reason of preliminary excessive indulgence.

As conscious impulsion has been shown to be the origin of the manifestations of psychasthenia it seems legitimate to conclude that any tic of which the patient is not consciously aware cannot be a symptom of this disease. According to other modifying factors which happened to be present in the patient such a tic might be due to neurasthenia, hysteria, or it might be only an example of true habit spasm: that condition which, as a diagnostic convenience, has been so much abused.

The different obsessive tics which occur in the face are easily distinguished, as Patrick ³⁴ recently has shown, from the uncontrollable and non-volitional organic facial spasms. In a later paper this writer states his conviction that spasmodic torticollis should be classified with the psychasthenic tics, and he adduces excellent reasons for adopting this stand.³⁵

In fact, it is not too radical to consider stammering as merely a type of psychasthenia; a psycho-neurosis of association, fear, and expectant attention. In writing about the insane temperament, or insane neurosis, which, according to his description corresponds with the modern psychasthenia, Maudsley ³⁶ asserted that: "Stammering and defects of pronunciation are also sometimes signs of the neurosis." Scripture ³⁷ has written more recently as follows: "My experience has convinced me that the disease is a pure psychomotor neurosis; it is a habit over which the patient has no control. It might properly be called a 'mental tic,' or the result of a compulsory idea connected with speaking."

The differentiation between chorea and the different varieties and combinations of tics is so readily made, as Graves ³⁸

and Patrick³⁵ have shown, that careful observation precludes the possibility of error in their diagnosis.

The types of psychasthenic attacks are innumerable, their nature depending entirely upon the character of their first causes and upon the personal equation. They vary in severity from elementary emotional attacks to severe epileptiform convulsions which may mimic epileptic attacks so closely as to be indistinguishable from them (Spiller³⁹). According to Boris Sidis,⁴⁰ George M. Parker,⁴⁰ William A. White,⁴⁰ and Ernest Jones,⁴¹ some cases which are typical of major epilepsy, a large number of cases of supposed petit mal, and most, if not all, cases of psychic epilepsy are, in reality, psycholeptic in nature, and, therefore, are not related to epilepsy in any other way than in their symptomatic resemblance to this disease.

Psychasthenic attacks usually follow some emotional disturbance, such as excessive fear, of which the cause may be either endogenous (coenesthetic), or exogenous, and the majority of attacks occurring in a given case generally can be found, by means of some psycho-analytic method, to have resulted from subconscious association of ideas. During the seizure the patient may be found to be susceptible to suggestion, and after its subsidence the memories of events which took place during its presence can be reproduced through the agency of hypnoidization, hypnotization, or of some other psycho-analytic procedure. These methods, furthermore, when skillfully employed, are capable of revealing a wealth of pathogenic and dissociated, or subconscious, ideation. Further points of differentiation are afforded by the inefficiency of bromide treatment, and by the absence of any impairment of intelligence, or of organic types of involvement of the memory. During interparoxysmal states the discovery of stigmata of psychasthenia is of diagnostic value, but, in making a diagnosis, too great stress should not be laid upon their presence, as epileptic convulsions often alternate with psycholeptic attacks of similar nature.

Among other interesting clinical studies of the genesis and subconscious mechanism of different psycho-neurotic manifestations Sidis⁴² relates the history and results of hypnoidal psycho-analysis in a youth who was subject to epileptiform attacks. Many years previously the boy had been obliged to sleep in a cold, damp cellar, and the shivering that was occasioned by the necessity to get up to urinate was subconsciously elaborated to

the extent that subsequent epileptiform attacks were precipitated by subconscious association of ideas. The words "dark, damp, and cold" being sufficient to produce the attacks at will.

Phobias are probably the most frequent causes of mental distress in this disease. Like the other phenomena they are manifestations of compulsory ideation, of the causes of which the patient is usually consciously unaware.

In writing about the normal emotions James⁴³ emphasizes the fact that: "they blunt themselves by repetition more rapidly than any other sort of feeling." This law is inapplicable to the morbid emotions of psychasthenia for repetition may increase the intensity of phobias.

Fear, when normal, is a conservative reaction, a reaction of defense, but when it becomes so elaborated and incongruous as to occur in the absence of a definite and normal end, or when it occurs as a pathologic effect of dissociation, then it may be considered harmful. According to Féré⁴⁴ emotions are pathologic when they are caused by what might be considered an inadequate stimulus, and when their intensity and duration are out of proportion to the stimulus.

Phobias, too, may be the symptomatic results of former painful emotional experiences and their origin may or may not be consciously known by the patient (association and "dissociation" neuroses). In reference to the sources of morbid fears Ribot states: "Some morbid fears have their origin in occurrences of childhood *of which no recollection has been retained.*"⁴⁵ It seems pardonable to digress here in order to condemn the pernicious custom of relating ghost stories and blood-and-thunder stories to children. Many adults whose minds otherwise are apparently normal have a fear of darkness, or some other phobia of like nature, which they can trace back to just such foolish stories.

As the exciting causes even of normal fear are numerous, and as abnormal fear may be centered upon innumerable additional objects, so the classification of phobias might proceed indefinitely. For descriptive purposes it is convenient to possess definite names for a few of the more commonly encountered phobias; remembering, meanwhile, that these are only symptoms.

Being ashamed of what they recognize as abnormal fears patients usually do not discuss them and often deny their presence. Consequently, during the examination of neurologic

cases, phobias very infrequently are made the subject of complaint, and, in order to ascertain their existence, specific inquiry must be made.

That their fears have no foundation in fact is quite generally recognized by these patients, yet, in spite of their logical reasoning, they are unable to reassure themselves.

The amount of apprehension, of mental anguish, which is capable of being induced by phobias scarcely can be estimated by others—unless severe cases have been observed by them during the paroxysm of terror. The mental state during such violent and pathologic emotions can be compared only with that of alienation.

Delirium of contact, (*délire du toucher*), a not uncommon variety of phobia and one whose origin usually is traceable without difficulty, is characterized by morbid fear of touching certain objects. A frequent type of *délire du toucher* is one which arises from abnormal fear of contamination (mysophobia). Delirium of contact is systematized when the underlying fear is centered upon a certain class of objects. It may have knives as its object because the patient fears, for instance, that he will stab himself, or others. Such a phobia, as already has been remarked, may terminate in the commission of the very act which is dreaded. Psychasthenics, however, rarely commit a crime.

Mania of doubt (*folie du doute*) another variety of phobia, may be centered upon the performance of any one or many of the routine duties of the patient's daily life; such as locking the doors or turning off the gas at night. Though he knows that he performed these acts yet, in order to dispel the torment caused by his obsession, he may be impelled to reassure himself many times, however much he reasons against the necessity to do so. It is only in the last week that a psychasthenic woman admitted to me that she was compelled, by a mania of doubt, to get out of bed four or five times every night in order to see if she really had locked the doors. The following day, a man who had the same disease confessed that he went through the same performance at least once every night. This man asserted, without having been questioned in this respect, that his *folie* was due to fear of burglars, and that it had been engendered by the many stories about burglars with which he had been saturated in his early childhood.

The occurrence of doubt as to the choice of two modes of

procedure, arising from fear of choosing the wrong one, results either in extended preliminary consideration of the advantages of each, or what frequently happens, total abandonment of the original intention through inability to come to a definite conclusion. Cases of this madness of indecision have been reported in whom difficulty was experienced in deciding even such trivial questions as to which leg should go into the trousers first in dressing. Such a statement may sound like an exaggeration, but it would be difficult, indeed, to exaggerate the possibilities of this symptom. The following case well illustrates the extremities to which it may lead :

A patient, until fifteen months ago a successful business man, has just come under my care for treatment of the most severe form of psychasthenia ever I have seen. To such an extent has this man developed the inability to come to a decision, through doubt of the best course to pursue and fear of choosing the least desirable one, that he had been confined to the house for over a month. When attempts were made to persuade, or to compel, him to go out walking, or riding, he refused absolutely to do so, because of his inability to decide the most trivial questions concerning how he should dress, whether he should shave or not, and many other trifling matters of similar nature. More than once he has been known to go without his meals a whole day rather than to subject himself to the disagreeable feeling of effort, or of mental distress, that would be occasioned by the acts of volition necessary to eat a meal, and on account of mania of indecision. For the same reasons, before he had confined himself to the house, he had stood on street-corners suffering from the cold for as long as three hours before he could decide to get on a trolley car. Besides this symptom, and many others of like nature for months he has had an utterly inexplicable fear which prevented him signing a check. Before beginning to neglect his business this symptom led to many complications, and in his home it embarrassed greatly his wife's management of the house and of his affairs. Opportunity for the psycho-analysis of this patient's symptoms not yet has been afforded me.

In my opinion, this patient is not insane. Of the many general physicians and neurologists who have treated him not one has questioned his sanity. All forms of treatment had been tried: none had benefitted him. Among these, rest cure had

improved his bodily condition, though it had aggravated, as it usually does in this disease, the psychopathic state.

Folie du doute is often directed towards religion and is then usually associated with mania of interrogation. The feeling of unreality, or Cotard's syndrome, is an additional factor in the production of a psychic state which often leads the patient to question the actuality of his own existence; or causes other and higher planes of pathologic forms of metaphysical speculation; including the problem of cosmic reality.

From what already has been said it will be seen that the mental state of a psychasthenic individual is, to say the least, most peculiar and distinctive. Such a person seems irresistibly impelled to display the most exasperating perversity of mental activity. If, for instance, the physician allows him to know that certain therapeutic results are expected the opposite is most apt to occur. For this reason the psycho-therapeutic treatment of such patients should be as indirect as possible, unless the deepest state of hypnosis be employed.

One patient, whose sole physical expression of psychasthenia is an occasional deep inspiration, expresses herself as follows: "I know that there is nothing wrong with my chest and that my whole trouble is mental. I know, too, that I must breathe deeply only because I expect to have this trouble and because I am afraid that I can't get my breath, but I can't help it. Something tells me that I won't get another breath; I know from my past experiences that I will; yet this knowledge does not help me any. I dread going anywhere because I know that I will be worse. If I go to the theatre I can pay attention to the play, though I am suffering the greatest mental torture the whole time. If I read a book I understand what I have read, but still the other part of me is perfectly conscious of experiencing my peculiar, indescribable fear. It is as if one of *me* says nothing can hurt me while the other *me* tells me that I am afraid. All of this causes me to feel so panicky that I must have help, and yet for the reason that the very nature of my trouble makes it necessary for me to overcome myself, I know that no one can help me!"

In describing their mental state, and without knowing anything about dissociation of the personality, patients show, in terms which cannot be mistaken, their knowledge of the disintegration that has occurred. What can be more significant, for example, than the description of the one and the other *me*?

What is more distinctive than the statements of patients who explain their condition by saying: "I can't help it. I know it is foolish and wrong, but *it* (the inner voice) says: "You must do this, or you must think that," and no matter how I strive against it I find that it is of no avail.

The more severe types of psychasthenia usually can be differentiated from neurasthenia and hysteria without difficulty; providing some of the psychic stigmata are elicited by specific questioning. The cases in which the diagnosis is doubtful are those presenting symptoms referable to more than one of the arbitrary divisions of manifestations of disaggregation of personality. The choice of diagnosis then depends upon the characteristics of the symptoms, upon the preponderance of those of one complex, and upon the personal equation of the examiner, which varies according to his conceptions of the psychoneuroses. Cases of hysteria almost invariably are contaminated with symptoms of neurasthenia, and, as Janet has declared, cases of psychasthenia which do not present symptoms of hysteria are rare.⁴⁶

In the examination and treatment of psychasthenia it is of the utmost importance to discover the cause of each of the psychic manifestations: For all of these, however bizarre they may seem, originated from some former unpleasant experiences whose nature must be ascertained before treatment can be instituted in an intelligent manner. It would be irrational and foolish to attempt to remove a phobia by direct reasoning, for, in the practice of abnormal psychology, as in other branches of medicine, the cure of the patient does not follow suppression of symptoms but is dependent upon the discovery and removal of their causes. Besides, the patient is able to, and does, pursue the same kind of reasoning, obviously without good effects for otherwise he would not appeal to a physician. Consequently, he does not appreciate the benign efforts of another to indicate to him the ridiculous nature of his fears.

The most effectual and logical form of therapeusis is that in which (1) the casual submerged memory complexes are discovered, by means of some psycho-analytic method, and (2) restored to consciousness, together with (3) the removal of psycho-pathologic tendencies, by means of psychic re-education and hypnotism, or other forms of psycho-therapeutics.

As to the first principle, the analytic methods which are of practical use are the relatively simple ones which are dependent

upon hypnotism, hypnoidization (Sidis ⁴⁷⁻⁵²), automatic writing and crystal vision (Prince ⁵³⁻⁵⁷), and the more complicated, and more delicate ones which necessitate the use of apparatus for making association reaction time experiments, or for "measuring" the emotions by means of the psycho-galvanic reflex.⁵⁸⁻⁶³ Caution must be exercised in the application of psycho-analysis by means of hypnotism and hypnoidization, in order that the statements of the patient may not be influenced by unconscious suggestion on the part of the analyst. That this possibility is actual is shown by the report of a case of psychasthenia which was analyzed by Walter D. Scott.⁶⁴

The value of the second principle is affirmed by the fact that many cases of psychasthenia have originated in, and are perpetuated by, dormant memory complexes, and by the fact that restoration of these to consciousness is often all that is necessary to effect a cure.⁷⁵

Finally, as all the symptoms of psychasthenia are purely of mental origin it must be conceded by all that the disease can be treated successfully only with some method which acts through the mind of the patient; whether this be with drugs, electricity, rest cures, work cures, or with undisguised psycho-therapy which is, in reality, the *sine qua non* of success by any form of treatment. Lewellys F. Barker,⁶⁵ of Johns Hopkins, shows that, excluding psycho-therapy, the various methods of treatment of the psycho-neuroses owe their efficiency to unconscious suggestion. He extols the value even of the simplest psycho-therapeutic measures in the treatment of functional nervous diseases and, in speaking of the "obsessed," he remarks: ". . . our greatest hope for cure lies in the psychic means." Furthermore, he lays great stress upon the necessity for making a correct diagnosis before resorting to psycho-therapy.

While recognizing the value of the rest cure in the functional neuroses Prince,⁶⁶ and others, have concluded that it is detrimental to certain cases because it tends to fix their symptoms. As a substitute for this popular method of treatment he outlines one as follows:

"First. Instruction of the patient in the nature of the symptoms and disease.

"Second. Fixed ideas, apprehension and erroneous beliefs suppressed by educational explanations with implantation of new, healthy ideas, etc.; faulty habits of temperament and

character corrected by instruction and insistence on rational points of view, etc.

"Third. Individual symptoms suppressed by electricity, suggestion, and other therapeutic agents.

"Fourth. Rules given for the daily conduct.

"Fifth. Improvement of nutrition, moderate rest, and, in extreme cases, isolation from previous surroundings only."

In a more recent paper Prince and Coriat ⁶⁷ call attention to this technique and report a number of cases of psychasthenic conditions, including several cases of psycholepsy, in which recovery speedily followed the adoption of hypnotic procedures and psychic re-education as outlined in this method of treatment. A number, unfortunately, of these cases are not good subjects for hypnotism in that their mental state essentially is most unfavorable for the production of the hypnotic condition.

Social intercourse, supervised by the physician, has been advocated by Sidney I. Schwab ⁶⁸ and seconded by James J. Putnam, ⁶⁹ as a means of psychic re-education through stimulation of the patient's social consciousness.

As a therapeutic agent which is of value in the functional neuroses, Addison Thayer ⁷⁰ has recommended manual training, and George W. Jacoby ⁷¹ has written a plea for the establishment of colony sanatoria in which patients can be agreeably employed with some occupation.

"A form of treatment upon which reliance can be placed, even in the most intractable cases of psychasthenia, is a course of private instruction in tumbling and general gymnastic work under a physical director who is especially fitted for the handling of neurotic patients. Such a man is one who treats his pupils in the same manner as an officer would treat a private soldier; one who not only will not listen to remonstrances from the patient but who will not allow such to be made; who by the very strenuousness of his methods forces the patient to concentrate his attention upon a diversity of exercises and tumbling which he is expected to do immediately upon command and without protest. In this manner, not only does the patient receive the direct benefit of physical exercise, but he acquires self-confidence, learns how to ignore his obsessions, and his ego-centricity becomes diminished by reason of subjecting himself to the will of another." ⁷²

By psychic re-education we mean any instructive or suggestive measures which have as their aim the education of the pa-

tient psychically to react in a normal manner to any stress. This explanation necessarily includes awakening of control of the emotions so that they, and their physiological concomitants, do not tend to occur to an extent which is out of proportion to the end to which they should be normal defensive reactions.

In selected cases there is no better means than a course of reading which includes such books as will tend to impress the patient with his true relations to the outside world; ones which should decrease his ego-centricity. For this purpose one may recommend such works as: "The Meditations" of Marcus Aurelius; the "Morals" of Seneca; the "Discourses" of Epictetus; Sir John Lubbock's "Pleasures of Life"; Helen Keller's "Optimism"; and many others of like nature.

The results that have been attained by Dubois ⁷² in the treatment of the psycho-neuroses are of great importance in that they exemplify the enormous possibilities of psychic re-education, coupled with more or less unconscious, but nevertheless positive, suggestive therapeutics.

The following cases are reported principally for the purpose of illustrating the mechanism of genesis of individual symptoms; to show the importance of painful and submerged, or forgotten, memory complexes in originating and in maintaining these symptoms; and in order to demonstrate, in these cases at least, the possibilities of psycho-therapy. It will be noticed that the obsessions of these patients disappeared immediately after their exact origin was explained (psychic re-education) together with the employment of suggestion, during the hypnotic state, as a means further to prevent their recurrence. As both of these patients were ashamed of their "unique and crazy" psychic manifestations these would not have been made the subject of complaint, or discovered by the examiner, during the course of an ordinary neurologic examination unless specific interrogations were made for them; consequently, the patients, otherwise resembling neurasthenics, would have been diagnosed and treated as such.

CASE I.—Emma A., aet. 35; stenographer and typewriter; applied for treatment November 23, 1908. She stated that she was naturally of a nervous temperament but that she never really had been ill until four years before, when she had "nervous prostration" severe enough to cause her to be confined to bed for four months. This was attributed by her to a series of minor nervous stresses which culminated in a quarrel during

which her mother threatened to kill her. Following the acute illness she had been subject to a number of distressing symptoms.

Since 1905 bright light had caused severe ocular pains, and auditory hyperæsthesia was so pronounced that she was compelled to stop working, May, 1908, because of the noise produced by the typewriter. Frequently, while walking along the street it was necessary for her to occlude her ears on account of the ordinary street noises. Once the slight noises produced by the fall of several boxes caused her to cry out in a store. Occasionally she was seized with attacks of general trembling severe enough to cause her to fall, unless she could prevent this by grasping some support. When excited she stammered.

Sleep, that was interrupted many times during the night, appeared only after a period of wakefulness lasting several hours. Almost every night she woke suddenly, in great terror, to find herself clutching the foot of the bed; *without, however, knowing the cause*. In the morning she felt more tired than before retiring the previous evening. Nocturnal somnambulism had occurred frequently when she was a child; but not since then. Fatigue was occasioned by the slightest exertion, and, in fact, she felt tired continually. Lumbar backache, irritability, restlessness, and diurnal occipital headaches that were severe and constant were additional symptoms which were made the subject of complaint. Globus hystericus frequently annoyed her. Not any symptoms of hysteria, or history of having had any of the manifestations of this disease, were elicited during the examination. The menses had ceased in 1903; five years after the removal of one (?) cystic ovary.

In the psychic sphere, inquiry for phobias revealed the existence of an indefinite and, to her, *utterly inexplicable* fear of crossing streets. This had been present for *three months*. By further questioning it was found that she had a vague belief that automobiles were connected in some way with this phobia but *she was not aware* of any reason for this doubtful association.

For several years she had been obsessed with a groundless fear which compelled her to look behind her however much she strove to overcome it. This phobia attacked her impartially at any time and in any place. She admitted, upon being interrogated, that she believed this apprehension to be based

upon unreasoning fear of being struck from the rear; but again *she was positive in her assertions of ignorance of its cause.*

During the examination she exclaimed: "Often things seem unreal!" and she admitted, further, that frequently she felt as if unreal herself, or as if she were not in this world but in some other one (Cotard's syndrome). Often she had been tempted to commit suicide because of the peculiar and unaccountable nature of her psychic symptoms and through fear of insanity. This apprehension was revealed also by her exclamation: "I am so nervous that I am not fit to be at large!"

Frequently she perceived, for a few moments, what seemed to be a sea of blood before her eyes. Other than this, she asserted, she had never experienced any visual or auditory hallucinations (*vide infra*). She was not a visualizer and was unable to understand how such a faculty could exist. Neither *folie du doute*, as to the choice of two modes of procedure, nor *délire du toucher* ever were noticed by the patient. While believing in God she was not a sectarian in religion and she had no abnormal or depressing religious ideas.

She showed no disposition to be influenced in a suggestive manner by the questions, made as indirect and as devoid of suggestion as possible, neither did she appear to exaggerate in answering; in fact surprise was displayed at the apparent irrelevant nature of some of the questions.

The physical examination proved to be negative except for the presence of three manifestations of hysteria; namely, a slight amount of functional concentric contraction of the visual fields; reduction, only during the tests of hearing, of conscious perception of auditory stimuli; and functional diminution of the gripping force as determined by the dynamometer.

November 23, 1908, a hypnoidal state (Sidis) was easily secured. In the attempt to obtain a deeper hypnotic state the process of induction was repeated twice; each time being accompanied by the development of general tremors, severe enough to resemble the clonic spasms of epilepsy.*

*This phenomenon has been noticed by me, during the first hypnotic treatment, in only two cases, and this rare and accidental incidence is the foundation upon which, by psychic contagion and unconscious suggestion, was built the former hypnotic crisis of the old mesmerizers. These hysteroid convulsions were then asserted to be normal symptoms of hypnosis when, in fact, they were solely the elaborated result of fear, in neurotic patients, of the mysterious agent which was being employed; and, furthermore, they occurred symptomatically as the effect of any fear, as already described in this patient and independent of hypnosis.

Appropriate suggestions having been made to prevent its recurrence this motor agitation never appeared in subsequent states of hypnosis. Catalepsy was obtained during the first two hypnoidal states and partial amnesia followed. Neither of these effects of suggestion were obtainable the third time because of the patient's unconscious or unintentional resistance through disbelief in the production of hypnosis.* While in these incomplete hypnotic or hypnoidal states she conversed voluntarily; stating that she was not at all "influenced" even though she was unable to open her eyes.

During her second visit, Nov. 25, 1908, a hypnoidal state again was induced and efforts were made to detect the causes of her different psychic symptoms. It required five minutes of persuasion and suggestion before she began to talk; due, as she afterwards confessed, to her desire to show me that she was not hypnotized and did not have to do as I said. The additional information then was obtained that her grandfather had committed suicide and that her mother frequently threatened to do likewise. She believed her mother to be insane, but was reluctant to express this opinion because it was contrary to that of a physician who had examined her mother.

An illegitimate girl of fourteen years who boarded at the patient's home was obstinate, quarrelsome, and showed other evidences of defective moral training. The patient worried about her, and, thinking that she might get into trouble, was adverse to her presence as a boarder. The attack of "nervous prostration" was precipitated by a quarrel, resulting from an argument over this girl, between the patient and her mother. Visual hallucinations of a sea of blood at first appeared only after similar quarrels; but the tendency for their recurrence became so developed and so expanded that they soon occurred after disputes with anyone. Furthermore, these hallucinations had been present only since the time when her mother threatened to kill her. When retiring she always feared that her mother would strike her on the head during the night. The frequent and irresistible impulsion to look behind her appeared about four months after the first quarrel, and was due, she said, to indefinite fear of being struck on the head. This obsession originally distressed her only when she was at home, and was a

*This belief in the production of hypnosis frequently occurs in those patients who do not develop amnesia at once, but it disappears subsequently in most cases.

manifestation of fear that her mother would carry out the threat to kill her. Later the tendency, characteristic of hysteria and psychasthenia, leading to the pathologic exaggeration of primarily normal reactions caused this apparently justifiable fear to become so expanded and incongruous that it occurred anywhere and without unusual provocation. The memory complexes of the causes of the original normal reaction, being of a pathologic nature, were voluntarily suppressed from consciousness so that the patient ultimately became unaware of the cause of this phobia as well as the other elaborated manifestations that originated from the quarrel.

Though unconscious, in her usual state, of having any terrifying dreams at night she remembered these while in the hypnoidal condition. Seven years ago she was almost drowned in the surf at Atlantic City. Since this incident she had dreamed almost every night that she was drowning and this, she explained, caused her to clutch the foot of the bed and wake up in great terror. Her fear of crossing the street, associated in some manner with automobiles, appeared to be the effect of thinking frequently about a friend who, while crossing the street two years ago, was killed by an automobile. This accident was discovered by questioning, as she did not believe that her phobia was connected in any way with the death of her friend even though it did not develop until subsequent to the accident. The feeling of unreality that had existed for about four years was explained by her as having been due to fear of insanity resulting from her peculiar psychic manifestations and from severe temporal headaches. Any special causes for her visual and auditory hyperæsthesia could not be discovered.

During this same hypnoidal state she acknowledged, without having been specifically questioned, that in March, 1908, while sewing one evening, she saw a man cross the room. Even though she realized almost instantly the hallucinatory nature of the occurrence she became so alarmed that she was compelled to search the house. Furthermore, she stated that several times daily she saw little shadows, or what appeared to be animals, running around the room. She seemed uncertain in her description of these hallucinations and it is possible that they originated in the psychically elaborated retinal shadows of *muscae volitantes*. She feared insanity and hallucinations were, to her, indicative of this condition; consequently, she concealed their presence for the same reason that women make

no complaints of their mammary nodules until compelled to do so.

During this visit she was kept in a hypnoidal state for almost an hour while the above facts were elicited. In addition, the origin and mechanism of her symptoms, as determined by this analysis, were explained to her (psychic re-education) and general suggestions, calculated to improve her condition, were then made.

After her usual state of consciousness was caused to reappear she asserted as before that she had not been hypnotized and that she did not wish to deceive me by allowing me to think otherwise. However, this belief soon was dispelled by the discovery that, while perfectly conscious of everything else that had occurred, she remembered nothing of what she had told me in connection with the genesis of her symptoms. In other words, she was unable to remember only those things of which she consciously was unaware previous to the induction of the hypnoidal state.

This case illustrates very nicely the pathogenetic influence of subconscious or submerged painful memory complexes. Almost all of the peculiar psychic manifestations of this patient were traced directly to the quarrel during which her mother threatened to kill her.

As to the results of treatment: She said, during her third visit, that she had noticed little change in her condition except that she slept much better and that her dreams were decidedly less unpleasant. Her suicidal tendencies, phobias, and other manifestations of obsessions, disappeared completely after the fourth hypnotic treatment, and she remained free from any of these symptoms, as long, at least, as she remained under observation (until February 28, 1909).

CASE 2.—Miss E. B.; aet. 19; cashier; applied for treatment September 3, 1908, stating that she had been perfectly well until about one year before, when, without any apparent cause, she gradually became nervous. She averred that she was very irritable and that she worried excessively without reasonable provocation. Desire to be alone; marked insomnia; lack of interest in what should concern her; desire for continual change, excitement, or "something new"; and emotional instability were made subjects of complaint. There was present constantly a feeling of fatigue which was most severe in the

morning, and which compelled her to rest about thirty minutes during the act of dressing.

Frequently she felt as if about to fall, or become unconscious. When it was necessary for her to walk along the street she was in a state of excessive anxiety as a result of the fixed idea that she would faint, or that some accident would happen to her before she arrived at her destination. Furthermore, she was unable to walk more than a couple of squares because of the great fatigue which developed. Emotional attacks occurred every week or two, and each followed some trifling excitement. Because of *tedium vitae* she wished often that she were dead and she confessed to having had suicidal tendencies. As she never talked about her symptoms to her friends she was considered by them to be a very jolly and happy girl. The family history was unimportant and no other statements were obtained which were of interest. The neurologic examination was negative; not a sign of hysteria being obtainable.

When asked repeatedly what had happened about a year before, or even further in the past, she insisted that nothing unusual had occurred and she professed absolute ignorance of any cause for her condition. Judging by the manner in which she made these assertions it was apparent that she was not telling the truth when she affirmed the absence of any mental stress. Though unusually intelligent she was very emotional and theatrical.

Permission having been obtained from her fiancé she was easily hypnotized two days later. Being asked, while she was in the hypnotic state, what had excited or distressed her about a year before, she exclaimed: "Oh, don't bother me! You always ask so many questions! I want to sleep! I feel so well now and so rested! That is what I need—to rest!" Upon further questioning she confessed finally that she had been forcibly seduced about one year before. (This statement was confirmed later.)

Naturally, this had been a great shock to her; the more so as she was engaged to another man at the time. Soon after the seduction morbid fear of men developed and became so elaborated that she was afraid to go to bed at night. In fact it obsessed her even when she was walking along the streets in the center of the city. She was positive, however, in the assertion that before having been hypnotized she was unconscious of any relation between her phobias and the male sex,

and that she had not even thought of her illness as having resulted from the seduction.

Appropriate suggestions having been directed against her the memory complexes of the painful experience, and its resulting symptoms, the patient was restored to her usual state of consciousness. At once she exclaimed: "Why I must have slept! I feel so well now; I don't want to die!" She admitted then having believed that she was being "jollied" when I suggested the use of hypnotism in her case. Not having had any faith, either in my ability to hypnotize her or in the possibility of any subsequent therapeutic results, she had consented to allow the effort to be made only in order to please her fiancé. The hypnotic dissociation had been complete, and, therefore, she was unable to remember anything which had occurred during its existence. On being asked again what had happened to her about a year before she repeated her former denials. She was not told at any time of her admissions during hypnosis.

On returning for her second treatment, two days later, she was much pleased at the great improvement in her condition, and particularly in her ability to walk more than two miles without any fatigue. At the time of her third and last treatment, Sept. 17, 1908, she asserted that she was perfectly well. I have not seen her since, but both her fiancé and one of her friends have kept me informed of her condition, and, according to their statements, she has remained well.

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CASES OF BLADDER TUMOR.

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10, 1910.)

It is not within the scope of a clinical paper to discuss the causes of tumor except to mention that according to Conheim's theory, which still remains the one most widely accepted, a portion of one of the embryonic tissues remains in its primitive condition in some one part of the organism instead of proceeding to complete development, and from this embryonic focus a tumor subsequently grows under the influence of causes the nature of which is unknown.

Again, the parasitic theory is offered, including the effects of irritation and trauma. Villous papilloma in the neighborhood of the ureteric orifice frequently results from irritation of a disordered kidney sending irritating urine over this part of the bladder.

Practically, we are more concerned with recognizing and treating the condition.

CASE I.—Engineer; age 53; patient of Dr. Lawrence, Reading, Pa.

Diagnosis.—Villous papilloma vesicae, hypertrophy of prostate.

History.—Complaint—pain in prostate referred to rectum, sciatic nerve and fossa navicularis; urinates every two and a half hours by day and night. These symptoms have existed acutely for four months, although during nine years complained of similar symptoms from time to time.

Cystoscopy.—Bladder capacity eight ounces, moderate enlargement of prostate, villous papilloma situated outer side of right ureteral orifice. (Fig. 1. Sessile.) Rectal examination—no hardness over tumor area. Pathologist's report confirmed diagnosis.

Operation.—June 2, 1909, at West Philadelphia Hospital, supra pubic cystotomy, removal of tumor, resection of portion of bladder wall, removal of prostate; no return of symptoms—cure.

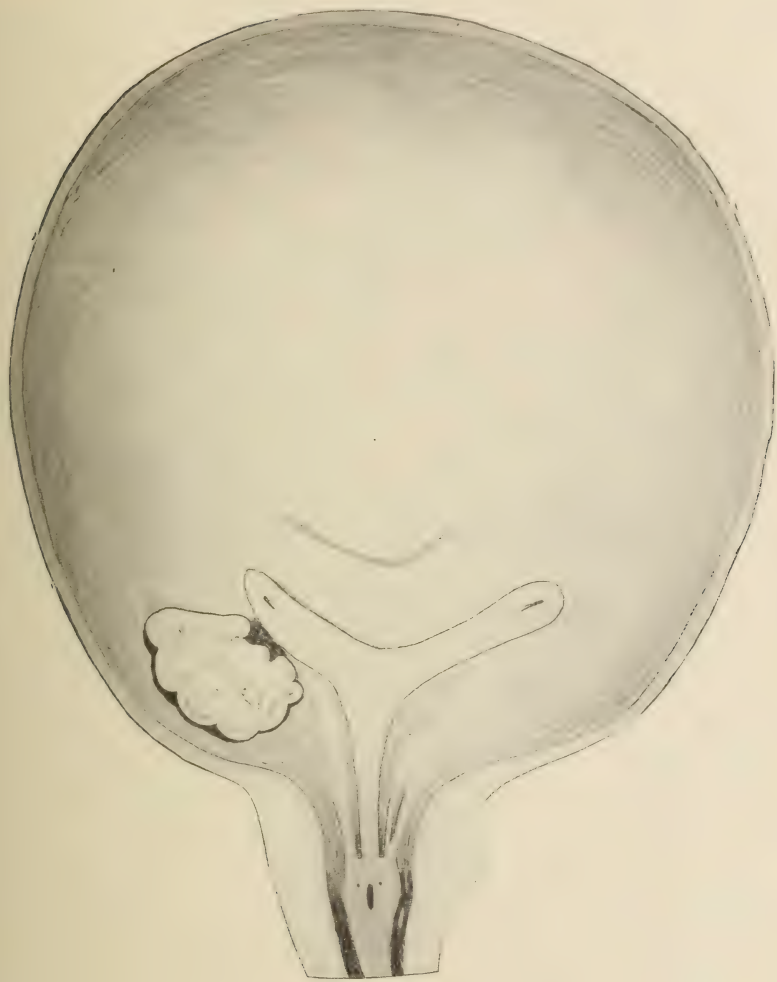


FIG. 1.

This case illustrates the wisdom of early and correct diagnosis and appropriate treatment.

CASE 2.—Bookkeeper ; age 55 ; patient of Dr. Schantz, Reading, Pa.

Diagnosis.—Lobulated epithelioma vesicae, hypertrophy of prostate.

History.—Complaint—A profuse hematuria recurring at semi-weekly intervals. Condition has existed since April 15, 1909. Occasionally passes stream of blood ; burning, cutting

pain referred to prostate, rectum, sciatic nerve, supra pubic region and fossa.

Cystoscopy.—Lesion situated above the prostate, below and to right of right ureteral orifice. (Fig. 2.) Summit of tumor slightly incrustated with urinary salts. Moderate dilatation of right ureteral meatus. Rectal examination—detected hard tumor in region just described. Pathologist's report confirmed cystoscopic diagnosis.

Operation.—August 24th, supra pubic cystotomy, removal of tumor and large portion of bladder wall. Patient reacted well, and was entirely comfortable for a period of three months in hospital. Later, however, passed small calculi with some burning pain in supra pubic region. Left hospital two months after operation. Report by Dr. Schantz, January 9, 1910, has had slight recurrence of hemorrhage and some urinary distress; general condition unfavorable. (I am inclined to believe that this case is showing recurrence of the carcinomatous degeneration.)

CASE 3.—Army officer; age 56; patient of Dr. Peters, Harrisburg, Pa. Referred February 22, 1909.

Diagnosis.—Sessile papilloma.

History.—Hematuria has been noticed at intervals during past four years. Recent attack six weeks ago, some pain over right ureter and kidney. Slight cachexia. Urination is at times distressing, burning referred to fossa, urinating six times in twenty-four hours; does not arise at night.

Cystoscopy.—Bladder capacity about eight ounces, prostate slightly congested, trigonitis chronic, right ureteral orifice slightly dilated, sessile papilloma located on posterior wall above inter-ureteral bar. Declined operation preferring to await result of internal medication. Conium 6x was prescribed together with bladder irrigation with boric acid every third day. Has been cystoscoped three times in past year, and papillomatous condition is about the same. There has been no return of hematuria. Has gained slightly in weight and has very little urinary distress.

This case illustrates the behavior of certain papillomata with respect to freedom from bleeding and slowness of growth. I am inclined to believe, however, that it should be removed.

CASE 4.—Printer; age 56; patient of Dr. Frank Allen, Philadelphia. Referred December 10, 1909.

Diagnosis.—Carcinoma vesicae encroaching on lateral lobes of prostate.

History.—Syphilis fifteen years ago (anti-specific treatment, however, has had very little effect upon the condition). For the last three years has been troubled with cystitis and been living a catheter life. Was operated by another surgeon one and a half years ago by supra pubic cystotomy for prostatectomy; operation incomplete,—removing but very little of the prostate and causing no relief.

Cystoscopy.—Tumor encroaching on rectum, areas of cystitis about trigone, medium enlargement of prostate.

Operation.—December 15, 1909, Hahnemann Hospital, supra pubic cystotomy for permanent drainage. Upon opening the bladder it was found impossible to remove prostate and tumors; was compelled to establish permanent drainage. Have seen the patient occasionally since operation and his condition is more comfortable than when on catheter life.

This case illustrates the value of permanent supra pubic drainage as an operative measure in relieving the pain and strangury of advanced carcinoma.

CASE 5.—X, Banker; age 60; patient of Dr. Bergenstock.

Diagnosis.—Carcinoma surrounding vesical orifice.

History.—Hematuria since August, 1907. Several times during this period had freedom from bleeding. Stream impeded, especially in the morning on arising. Some cystitis. Two years ago two stones were passed from left kidney.

Cystoscopy.—Difficulty was experienced in cystoscopy, as it was impossible to get a clear medium. This I have frequently discovered is not unusual when one attempts to wash out a bladder, the seat of cancerous degeneration, and particularly where the tumor abuts on the vesical orifice, because of their unusual situation, they bleed upon the slightest instrumentation, obscuring the field and rendering diagnosis by the cystoscope almost impossible. I, however, succeeded by using the patient's urine as a medium, discovering a bulbous projection about the size of a bean on either side of the vesical orifice. The rest of the bladder and ureters appeared to be normal. I made a diagnosis of malignancy and suggested removal. (The patient, however, differed from my diagnosis, believing that he suffered from Hæmospermia because of the fact that a similar bleeding took place during coitus.) He died within a year.

This case illustrates the rapidity of growth of malignant tumors at the bladder neck.

CASE 6.—Mrs. S.; age 62; patient of Dr. M. F. Middleton, Camden, N. J.

Diagnosis.—Villous and lobulated epithelioma (?) vesicae.

History.—The history of this case is of extreme interest. A sister died of cancer of the bladder. I first saw her on June 1, 1907, during an attack of hematuria which had existed



FIG. II.

for one week. The urine was dark and clotted. Had a similar attack one year ago which had lasted for one week—her first attack. No cachexia.

Cystoscopy.—Bladder capacity normal, urine returning clear after several washings; lesion villous in character, situated on the left side of bladder slightly to right and below the left ureteral orifice, (Fig. 3) region about trigone and other parts of bladder normal. I advised operation which was declined.

Cystoscoped at monthly intervals, during which time there was no return of hematuria. From time to time she received bladder irrigations of boric acid, and Hamamelis internally. November, 1909, was again requested to see patient during an attack of hematuria. Urine presented the same dark, clotted appearance, adhering to bottom of the chamber. Now there is some cystitis, urinating frequently by day and night; also supra pubic burning and slight cachexia.



FIG. III.

(2) *Cystoscopy*.—Using patient's urine as medium reveals an enormous increase in size of growth, numerous villi projecting over the left ureteral orifice and towards the vesical sphincter, and situated at tumor base a cauliflower growth. (Figs. 2 and 3.) Area on left side of bladder congested and ulcerated. Superior bladder wall shows slight ulceration.

This case, I believe, represents the transition stage between benign villous covered papilloma and cancerous degeneration.

Had the patient submitted to operation when first seen, the prognosis would have been favorable.

The presence of blood in the urine is the cardinal symptom which should announce the possibility of bladder tumor; this occurs at various intervals, although not until the growth is large enough to be squeezed by the bladder walls or until it stretches the walls.

The hematuria has many characteristics; spontaneity is one, the hemorrhage coming on usually uninfluenced by exertion, and apparently disappearing as spontaneously as it arose, without the intervention of art. (Physicians some times congratulate themselves that the injection of certain drugs into the bladder stops such hemorrhages, or that drugs given by mouth cause cessation of bleeding, but as a rule bladder injections serve only to increase bleeding, particularly in the villous variety, inasmuch as the distention of the bladder with fluid causes undue spreading of the villous branches and stretching of the base of the tumor with resulting bleeding.) The bleeding is not constant. I have a record of several cases where it is moderately profuse irrespective of the size of the growth, although villous growths bleed more profusely than the flat ones. As a rule, however, patients will give a history of weeks and sometimes months of freedom from blood; in the case of Mrs. S. it did not appear for eighteen months. Of course, as the growth enlarges hemorrhages increase. It eventually becomes almost continuous, the patient becoming markedly anæmic, salivary, dyspeptic and uræmic.

Pain is the next symptom of importance. As a rule, it does not come on until the stage of cystitis, unless the tumor is situated near the orifice of the bladder when, of course, it will be both acute and constant. Pain, however, is decidedly severe in the later stages, becoming so unbearable that anodynes must be given for its relief. It is usually sacral and sciatic, and often referred to the perineum, supra pubic region and fossa.

Of especial importance is the kidney ache experienced. It is usually confined to the kidney corresponding to that side of the bladder where the tumor is located. In the case of Mrs. S. considerable aching was experienced over the left kidney and ureter. This was due to the villous growth covering the ureteral orifice and practically blocking it.

Frequent urination is always present during an attack of hematuria, but upon the cessation of bleeding disappears until

the stage of cystitis. Stoppage during urination is not infrequently met with in villous papillomata, due to the growth (and sometimes clots) corking up the urethral orifice. In the sessile form one does not often meet with this factor.

Irritability of the bladder is usually present, due to an unemptied organ. Pus is always present, especially marked when cystitis occurs, and is most annoying and distressing, this complication causing agonizing pain and ultimately crippling the kidneys by ascending infection.

Cystitis is not so marked in benign tumors, but decidedly prominent in the malignant types.

Ultzmann mentions a condition of the urine in which it contains a large quantity of exceedingly viscid, tenacious mucus, which converts it into a thick, jelly-like, fibrinous mass, adhering so firmly to the surface of the vessel containing it that the latter can be turned upside down without causing it to run out. He has never seen this condition except in three cases of cancer of the bladder.

From time to time contraction upon a villous tumor may cause the appearance of shreds of tissue in the urine.

As previously stated, cystitis is the terminal stage of bladder tumor, and is usually the forerunner of the end. Infrequently hemorrhages stop during this stage.

Presumptive diagnosis of bladder tumor may be made in the presence of the symptoms just enumerated, although many of these signs are observed in cystitis resulting from stone and other causes. A more accurate opinion may be formed by bimanual palpation, examining through the rectum or the vagina, and applying one hand supra-pubically. This is of value, however, only when the growth is very large; otherwise, in the benign villous forms and where the tumor is situated away from the trigone, it is valueless. The correct way of arriving at a diagnosis is by the intelligent use of the cystoscope, since it will determine the location of the growth, and perhaps to the expert its character.

Inasmuch as bleeding sometimes baffles all attempts at cystoscopy, particularly when the tumor is villous, or very large, and especially so when it is situated at the vesical orifice (as in the case of X), and since washings of the bladder with a view of obtaining a clear medium through which one may see frequently defeats the very end for which it was intended, distending the bladder and causing hemorrhage from the growth,



FIG. IV.

it is well to wait until the bleeding ceases, or until clots have formed, and then attempt cystoscopy, using the patient's urine as a medium.

I will not attempt to describe the various pictures one sees, except to say that we will usually meet with these varieties of tumor,—the benign villous covered growth (Fig. 3) the malignant villous covered growth, (Fig. 4) the bald malignant growth, (Fig. 1 approximates).

The outlook for bladder tumor is decidedly discouraging, particularly in the cancerous forms. Even in the benign type the exhausting hemorrhages to which is added cystitis and renal sepsis eventually cause death. I believe that the only hope for those who have benign tumor of the bladder is to recognize it early and then thoroughly remove it; particularly is this so of the villous type, since it is not so liable to degenerate into malignancy, and if not thoroughly removed will tend to recur at different parts of the bladder and then undergo malignant degeneration.

Palliative operations in the cancerous form are of occasional benefit, making life comparatively comfortable by partially freeing from pain and cystitis.

Hemorrhage may be controlled by antipyrin. It is usually employed in a 5 per cent. to 10 per cent. solution, and from ten to fifteen grams of this salt may be introduced into the bladder in twenty-four hours. The patient should be watched, however, and if any of the symptoms of intoxication become manifest the dose should be decreased; but if the above amounts are not exceeded, one will rarely observe any untoward symptoms. Suavan (*American Journal of Urology*, October, 1908,) says of this drug: "The vaso-constrictive action of antipyrin is not followed by a paralytic dilatation, and, consequently, secondary hemorrhage is hardly to be feared, for, in reality, it is quite exceptional." Tardy hemorrhage is also prevented from the fact that the hard and very adherent clot forms a hermetic plug resisting the action of the pyogenic bacteria. It has been established, both experimentally and clinically, that when the hemorrhage has been stopped it is ordinarily permanent.

I have, however, called attention to the futility of attempting to control bladder hemorrhage by irrigation in the villous form. Clots, if present, should be removed by aspiration. Pain, of course, calls for anodynes and palliative supra pubic cystotomy.

F. S. Watson says (Watson and Cunningham, *Genito-Urinary Diseases*) that the treatment of tumors of the bladder is one of the most discouraging in surgery. He gives a complete resume of 683 cases, and I beg leave to quote him almost verbatim:

In this series I have studied more especially with reference to operative mortality, recurrence, non-recurrence and causes of death, in connection with each of three special surgical procedures as applied to each special kind of tumor, the surgical procedures being supra-pubic operation other than partial resection of the bladder, partial resections of the bladder and total extirpation of the bladder. The results found are as follows:

1. Benign tumors treated by supra-pubic operations other than partial resections of the bladder. Cases, 319; operative mortality, 10 per cent.; known recurrences, 30 per cent.; known cures, 20 per cent.

2. Carcinoma. Same treatment. Operative mortality, 24 per cent.; known recurrences, 68 per cent.; known cures, none.

3. Carcinoma. Partial resection of the bladder. Cases, 96. Operative mortality, 21.8 per cent.; known recurrences, 56 per cent.; known cures, 5 patients.

4. Carcinoma. Total extirpation of the bladder. Cases, 38. Operative mortality, 50 per cent.; later deaths, 8; known recurrences, 2; known cures, 2.

5. Sarcoma. Cases, 55. Myoma. Cases, 16. But one patient known to have been cured.

6. Cholesteatoma. Cases, 10. Recurrences known, 2; cures known, 2.

Bad as is this exhibition of surgical results, it is in the case of benign tumors 20 per cent., and in malignant tumors seven times better than the result of palliative treatment, and the only treatment which offers any hope.

Why should there be such a large proportion of recurrence in the cases of benign tumors and why such a great operative mortality in connection with the cases in which partial resections of and total extirpations of the bladder were done?

The explanation of the facts stated with regard to benign tumors is, I think, to be found chiefly in the following things:

1. The probability that a good many neoplasms believed to be benign were in fact malignant.

2. The large number of recurrences in malignant form following the removal of tumors said to have been benign.

3. The marked tendency of papilloma to recur in parts of the bladder other than the site of the original tumor.

4. The failure to remove the base of the tumors thoroughly enough.

5. The overlooking of beginning papillomata when removing a more developed growth.

The explanation of the large number of deaths from shock and from renal infection in the operations of partial resection and total extirpation of the bladder is to be found in the study of the causes of death. This study shows that there are just three fatal factors of importance connected with the performance of these operations. They are:

1. The lowered power of resistance of the patients, which is so frequent a feature of cancer when it has advanced beyond its early stages of development.

2. Shock.

3. Renal infection.

To avoid renal infection and shock, Watson submits the

following, in which he is endorsed by Albarran, Tilden, Brown, Young, Cabot and Fenwick; first, the diverting of the urinary secretion from the bladder by bi-lateral nephrostomy, tying off the ureters and establishing permanent renal drainage in both loins; this is a step preliminary to undertaking any operation whatever upon the bladder; and finally, that total extirpation of the bladder should be done in the class of cases above noted at whatever time in the course of the convalescence from the preliminary operation it should be appropriate.

Of course, this operation has all of the advantages possessed by nephrostomy in that it does away with the irritating effects of urine upon malignant growths of the bladder; but it is a very formidable one, the mortality rate being 50 per cent. Most surgeons content themselves with supra-pubic operations either with a view of completely removing the tumor or for palliation.

As this is not a technical discussion on supra-pubic cystotomy I will not describe it, except to say that a wide margin of bladder tissue should always be cut away with the growth. Following this the base of the tumor is to be cauterized. The drainage tube may be removed from the bladder within a week and the bladder irrigated daily. Where an extensive malignant growth cannot be thoroughly removed, drainage is of value in relieving pain and cystitis. Resection of the entire bladder with implantation of the ureters into the rectum or vagina has been followed by such poor results as to lead Watson to suggest the operation which I have previously described. Tumors situated at the apex of the bladder may be attacked extra peritoneally, but unfortunately growths are not usually located in this locality.

In conclusion, I beg leave to say that surgeons rarely see many cases of tumor of the bladder. Some report experiences with fifty cases. But tumors may be recognized by one who is a skilled cystoscopist, and if benign, good results may follow thorough operation. It is well to excise all growths since errors of diagnosis may be met with.

EDITORIAL

THE INSTITUTE JOURNAL.

Two numbers of the *Journal of the American Institute of Homœopathy*, published under the auspices of the Board of Trustees, have now appeared. A careful perusal of the same tells us at once that the venture in its present form will prove as satisfactory as the old arrangement was the reverse. If we have any fault to find with it it is the matter of news, which, we believe, should have a direct bearing on the progress of our school and its societies and colleges and hospitals in various portions of the country. Personal items interest only those who have an acquaintance with the individuals sufficiently illustrious or aggressive to obtain mention, and do not advance the interests of the school to any appreciable extent. To those who like that sort of thing, it may prove an incentive to do things.

So presentable and valuable is the new Journal as conducted by Dr. Horner and his associates, that we feel it to be a more dangerous rival of the various independent journals than was the one published last year. For this we are not sorry, as it will only serve to stimulate us all to do better and make our journals dangerous to that of the Institute as a result of a friendly rivalry.

It is unfortunate that the Trustees were forced to accept as conditions for ending the old contract certain restrictions as to the material to be accepted for publication. The limitation of papers to those read before the Institute is a matter for legitimate differences of opinion. Restrictions as to news and editorial management are, to our mind, decidedly out of place.

We regret exceedingly that the old Journal Committee should have seen fit to send a circular letter to the Institute membership at large. To say the least, it was an act of bad taste. No one questioned for one minute their integrity. They acted according to their best judgment. Everyone makes mistakes of judgment. This is to be regretted, but it cannot be

prevented. The publication and mailing of the committee's latest pronunciamiento was, in our opinion, a serious mistake, which we trust those who affixed their name to it, now regret.

GOOD NEWS FOR ALL.

SINCE the preceding editorial was written we have learned from a reliable source that through the liberality of Dr. John W. Ward, the honored president of the American Institute of Homœopathy, the vexing problems connected with the Institute Journal have been brought to a happy solution and the Institute is now free to conduct its journal free from all incumbrance and hindrance.

It will be recalled that when the Board of Trustees of the Institute entered into the last contract with the Century Publishing Company, they were compelled to accept certain conditions placing restrictions upon the editorial and business departments of the Journal. A few days ago word came to Dr. Ward that if some means could be provided by which the \$2,000.00, due the Century Publishing Company under the contract, in October, 1910, could be advanced at once and the disputed claim of \$338.00 between the Treasurer of the Institute and the Century Company be settled, the Century Publishing Company would remove all restrictions on the Journal. Dr. Ward at once forwarded his personal draft for the \$2,000.00 and also settled the disputed claim of \$338.00. This latter sum Dr. Ward has voluntarily donated to the Institute and also adds that the Institute can return the former amount (\$2,000.00) when the treasury is in condition to do so. In the meantime he will accept no interest for the use of the money.

It is impossible for us to find words to express our admiration of this generous and patriotic act on the part of our esteemed President. In these days when men are inclined to think more of money than of principles it is indeed an inspiration to find a man who is willing to put himself to considerable personal loss in order that the cause that he believes to be right may be advanced and that every hindrance which prevents the benefits of homœopathy from being extended to all mankind may be removed. We rejoice that the matter is set-

tled; we rejoice that the Journal Committee will now be able to shape the policy of the Journal so that it will exhibit the full life and vigor of our school; but more than all we rejoice in the fact that the magnanimous act of Dr. Ward has set before the members of the Institute an example that should be an inspiration to all to labor more industriously and to fight more unselfishly for the welfare of the Institute and the principles for which it stands. With such a man as our leader there is no reason why every member should not join hand in hand to work zealously and harmoniously for a large and successful meeting at Los Angeles in June.

ORAL TESTS AS A PART OF THE EXAMINATIONS FOR LICENSE TO PRACTICE MEDICINE.

THE National Confederation of State Medical Examining and Licensing Boards at its last meeting gave considerable attention to the subject of oral tests as a part of the examinations for medical licensure.

Dr. Joseph C. Guernsey, of Philadelphia, whose earnest efforts to improve the standards of the medical profession, and whose long experience as a medical examiner have rendered him eminently fitted to speak of the subject in an authoritative way, was appointed acting chairman of a committee to study and report on the desirability of adding such oral tests to the written examination that is now ordinarily used.

The conclusions reached by this committee and set forth in their report are so clearly stated and so in accord with the views of medical teachers, that we can do no better than to quote the words of the committee. Referring to the reasons why written examinations alone fail to give an accurate idea of the applicant's medical ability, the report states:

"Written examinations do not determine a physician's knowledge and efficiency because:

"(a) They fail to exhibit in each individual his practical ability. It requires oral examination to demonstrate the fitness or practical knowledge;

"(b) They are not in keeping with the mode of teaching of the present day, which is very largely applied knowledge. The ascertaining of applied knowledge by medical examiners predicates oral examination in practical laboratory work, at the bedside, etc.;

“(c) They do not sufficiently cover the field of present requirements for licensure. Working ability in the various branches of medicine is demanded to-day, and this can be ascertained only by oral examination in a demonstration of surgery, obstetrics, chemistry, physical examinations, etc.;

“(d) They are unfair to a large number of applicants among whom are old practitioners of ample experience. Many of these fail to do justice in writing to their knowledge and practical worth, but prove eminently capable in oral examinations;

“(e) They are not conclusive of merit for medical licensure. Many applicants, even without an adequate foundation, after a few weeks of cramming from quiz-compends take in enough generalities to pass successfully a written test, which after all is merely a matter of memory; in other words, written examinations are largely proof of memory, showing but little scientific attainment and nothing of practicability;

“(f) Written examinations are not used by men of big affairs in selecting assistants for responsible positions. They look for doers of deeds and, judging practical results as evidence of fitness, they secure men of brains and ability. Physicians are men of big affairs, and should select as their assistants by granting them medical licensure only those who show ability;

“(g) In Europe medical examinations are written and oral, clinical and laboratory. In Canada oral and practical examinations are required in addition to the written. If oral and practical examinations are found feasible and necessary in Europe and Canada, they are equally so in the United States.”

These statements set the matter forth so clearly and so rationally that it is difficult and unnecessary to add to them. We might say, however, that we believe that not only would the oral tests be of value in enabling the Examining Board to more accurately determine the ability of the applicant, but they would also be very acceptable to all applicants who are properly qualified to receive a medical license.

That a certain amount of deception may be practiced even in oral tests, however, must be borne in mind, as illustrated by an example which has been brought to our attention by one of our colleagues. A medical student, it seems, about to be examined before a well-known teacher, came into the examining room with a piece of absorbent cotton in his ear, and, pulling it out, stated that he was suffering from an acute attack of otitis media and that he had to remove the cotton in order to hear distinctly. Influenced by the suggestion, the examiner at once proceeded to quiz the student very thoroughly on the etiology.

diagnosis and treatment of acute otitis media. The student, who had very thoroughly prepared himself on this subject, was delighted, as was also the examiner by the full and accurate answers which he received to his questions. It was not until some time afterwards that the examiner learned that the attack of otitis media was a fiction, and that the high mark which the student received was due more to his shrewdness than to his professional knowledge. Instances of this kind, however, must necessarily be very rare, especially where practical tests in the use of the microscope, method of physical examination, etc., are used in conjunction with it.

The National Confederation certainly deserves the earnest co-operation of every progressive physician in its endeavor to bring about this long needed change in the methods of examination for medical licensure, which we believe will tend to elevate the standards of the profession and to exclude those who are incompetent to engage in such a responsible work.

OLD SCHOOL THERAPEUTICS IN THEORY AND PRACTICE.

EVERY now and then some eminent authority of the "Old School," in writing a paper intended to reach the more intelligent of the laity or to be presented before a Homœopathic Medical Society, lays great stress on the marked advances their school has made in the matter of the careful selection of medicines for therapeutic purposes and on their abandonment of poly-pharmacy. "Thus," they say, "the two schools of medicine are gradually coming closer together, and we recognize, with regret, that in the past we have been prone to indiscriminate drugging and to the too frequent administration of useless compounds." So far have some gone that they have advised that the National Formulary with its conglomeration of "shot-gun" prescriptions and compound mixtures be relegated to the therapeutic ash-heap. So much for the remarks of these eminently scientific men regarding the advance in practice among the members of their school.

Now let us proceed to examine some of the therapeutic measures that are advocated in the leading journals of the "Old School" in order to determine their actual practice in this respect. A few examples will be sufficient to illustrate the fact that not only do the "Old School" physicians as a body adhere

in practice to the ancient methods of poly-pharmacy but they are advocated daily by some of the most eminent of their writers. Thus, in a recent medical journal appeared an abstract from a lecture by Professor Robin, of Paris, in which the Professor stated that there are certain conditions in which a milk diet must be given. To enable the patients to acquire a tolerance for the milk, Professor Robin advised three drops of the following mixture to be taken before each dose of milk:

R :

Solanin,
Dilute Sulphuric Acid,
Picrotoxin,
Hydrochloride of Morphin,
Hydrochloride of Cocaine,
Sulphate of Atropine,
Ergotin,
Cherry Laurel Water.

After each dose of milk the patient must take a tablespoonful of Elixir of Pepsin, and after the 1st, 3rd and 5th doses of milk the patient is to receive a powder consisting of:

R :

Calcined Magnesia,
Sodium Bicarbonate,
Pulverized Sugar,
Prepared Chalk.

That such an absurdity should be foisted upon the profession, even in France, seems almost incredible, and yet the matter is taken so seriously by our "Old School" friends that a reputable American journal saw fit to translate it for the enlightenment of the medical profession in this country.

Another recommendation emanating from the same source, also copied in this country, is a prescription for "Bronchitis with Violent Cough" consisting of the following:

R :

Bromoform,
Tr. Bryony,
Tr. Grindelia Robusta,
Tr. Nux Vomica,
Tr. Hyoscyamus,
Alcohol,
Syrup of Opium,
Syrup of Bitter Orange Peel.

The therapeutic value of such a mixture of strong drugs on the bronchitis must certainly be extremely questionable in the mind of any thinking physician, whereas any tyro could readily perceive that its affect on the stomach would in all probability be most disastrous.

Such examples as we have above quoted may be referred to by our "Old School" friends as unusual examples of compound prescribing. To our personal knowledge, however, prescriptions quite as complex and senseless are given daily to confiding patients by many of the most prominent and scientific (?) "Old School" practitioners in this country.

Whatever they may say for the benefit of the public or in theoretical papers intended to soothe the ears of a certain class of homœopathic physicians, their method of practice remains substantially as crude and empirical as it ever was in the past. Men who have been reared with such therapeutic ideas as are at the basis of prescriptions of the type we have cited can rarely be brought to realize the reasonableness and the practical value of the administration of a single carefully selected drug agent in the treatment of disease.

THE IMPORTANCE OF COURTESY AMONG HOSPITAL EMPLOYEES.

THE lack of courtesy displayed by hospital employees to physicians and friends of patients is a matter that has frequently been brought to our attention. It would seem that there is no other class of persons who have more opportunity or more need to act in a courteous manner toward professional and lay visitors to the institution with which they happen to be connected, and yet we know that some institutions are made decidedly unpopular, despite the character of work they do, because of the discourteous and over-bearing manner adopted by those who are employed for the purpose of serving the hospital and its interests.

The matter was brought to our attention very forcibly a few days ago by a physician who related his experience when on a visit to a well known hospital in Philadelphia. The physician in question had occasion to see the Superintendent of the hospital, who in this instance happens to be a woman, and was directed by an orderly to the Superintendent's office. After read-

ing the sign over the door to be sure that he had the correct office, the doctor entered a room furnished with a desk and other ordinary office equipment. Seeing no one in the office, he sat down to await the arrival of the Superintendent.

Scarcely had he done so when the door opened and a woman entered and demanded, in a very insolent way, what he was doing in there. He explained that he was a physician and had called to see her regarding the removal of a patient from the ward of the hospital to a private room. She told him to leave the office at once, stating that it was her private office, and, without giving any time for explanation, insisted that he should go to another office in a different part of the building.

A glance at the type of woman with whom he had to deal assured the doctor that nothing more courteous or satisfactory was likely to be gained by interviewing her, so he withdrew and arranged the matter through the medium of a friend who happened to be connected with the same institution.

That others have been treated in a similar way at the institution in question we have been repeatedly assured, and another physician, who is a graduate of the institution to which we refer, informs us that he has long since withdrawn his patronage on account of the discourteous treatment that he received there.

It is, therefore, evident that the employment of such persons by a hospital is a financial loss to the institution. Physicians, it is true, are perhaps more sensitive than men engaged in business pursuits, and may be somewhat quick to take offense where none is intended. Inasmuch, however, as it is rather a difficult matter to change the disposition of physicians, it is all the more necessary that hospitals should select, especially for offices of importance, people of courteous and kindly bearing and disposition.

We have known more than one hospital that has lost the financial support of wealthy and influential people among the laity because of the disrespect shown them while visiting the hospital for the purpose of inquiring as to the condition of friends who were being treated there. We are fully aware that people who are worried and nervous because of the illness of a friend or relative are frequently annoying and unduly insistent in their inquiries. Such a state of mind, however, is entirely natural under the circumstances and does not warrant offensive or indifferent treatment on the part of the employees of a charitable institution.

We are glad to say that the institution referred to in the incident previously related is not affiliated with the homœopathic profession. Fortunately, the homœopathic hospitals in this city are, generally speaking, above reasonable criticism in this respect.

HYPERKERATOSIS SUBUNGUALIS FROM THE ROENTGEN-RAY.—The number of Roentgen-carcinomata developing from chronic Roentgen-dermatitis is 33, all of which are not relatively benign neoplasms, for 7 have resulted in the death of the afflicted individual. The majority are physicians or X-ray technicians who have long occupied themselves with this agent. The writer, Dr. Wehrsig (*Munch. med. Woch.*, 1909, No. 32) considers that the initiative action of the ray is too often and too long disregarded when we consider the great danger run if, despite the commencement of the reaction, the use of the ray be persisted in. This prodromal reaction attracts but little attention from the physician who, as a rule, considers it an eczema from the use of sublimate solutions. The author has paid, in his own person, for the error of confusing the Roentgen reaction with the effect of corrosive sublimate upon the skin, and, to warn colleagues against like error, has made public his own anamnesis. After about two months' work with the ray, he noted a morbid condition of the skin of his hands and forearms, which he considered an eczema from the use of a sublimate solution. The latter was stopped, and the "eczema" retrograded. About a month later, however, he noticed a peculiar alteration in the nails, which began to lift up from the matrices, to split along the anterior margin, while beneath them keratotic elevations began to develop and to push the nails from the flesh. The process first affected the thumb nail, gradually extending, however, to the fingers. There was a steady, cockscomblike formation of hyperkeratotic tissue in the matrices, which pushed up the nail so that after three or four months, that nail was attached to the matrix in the region of the lunula alone. The nails increased 2mm. in thickness, lost their polish, were markedly arched on the sides, and angulated, roof-like, in the median line. Only after many months did the author recognize his error and stop Roentgen work. The process continued, the nails growing as misshapen plaques.

COMPARATIVE STUDIES OF THE ACTION OF GAS BATHS.—In the *Zeitschrift f. exp. Path. und Therapie*, Bd. 6., 2. 3, Drs. Klug and Trebing give the results of their work in the following conclusions: Carbonic acid baths cause, in general, an increase in blood pressure, while oxygen baths decrease it. The pulse is both strengthened and slowed by carbonated and by oxygenated baths. The irregular pulse is more favorably influenced by the carbonated baths. In cardiac weakness, the carbonic acid hydrotherapy is indicated. In all morbid conditions where there exists also a pathologically augmented blood pressure, the oxygen bath is best. In functional neuroses, particularly in neurasthenia and hysteria, and also in disturbances of the vaso-motor apparatus, the carbonated baths commonly appear to be more helpful.

GLEANINGS

THE DANGERS OF SEROTHERAPY.—Dr. E. Scheidemantel, in the *Munch. med. Wochenschrift*, No. 43, 1909, takes up arms against the modern, often unwarranted, use of sera, whether specific or non-specific in nature. The repeated exhibition of large quantities of these substances may be followed by grave constitutional conditions and phenomena of collapse, well illustrated in the following case of the author: A robust, well-nourished girl, aet. 19, suddenly fell ill, with chills and high fever. Hospital diagnosis was sacral osteomyelitis; surgical interference refused. Internal remedies had no effect upon the 2-months' fever, and the writer resorted to a streptococcal serum (Menzer), three injections, of 10 cc. each; later, three injections of Hochst's streptococcus serum. After the last injection (5 cc.) the patient complained of violent pains and dizziness; vomiting, cyanosis, hemorrhagic streaks on face and chest, cessation of respiration, pulse scarcely perceptible.

In this case and in others of the author and from the literature, the characteristic feature is, that repetitions of the dose of serum, whether weeks or years intervene, is accompanied by severe reactions, both local and general, and, in all instances, dangerous. That condition is entered into, which, in general, has been termed: anaphylaxis, allergy, or hypersensitivity,—a phenomenon which, at the present time, represents the highest aim of the modern investigator in the matter of conferred immunity. The writer brings up the question how, in the treatment with the newer sera, patients may be protected from severe injuries, which, under certain conditions, have no relationship with the results of treatment. Against a congenital allergy or hypersensitivity of a few isolated individuals toward foreign seri (*i. e.*, from other species of animals), we are quite as helpless as where the patient shows an idiosyncrasy in regard to certain drugs. Before any injection of serum, the attendant should determine if there have been previous injections of sera in each particular patient. Umber and Klemperer report that some cases showed intense reaction even where three years intervened between the initial and the reinjection. Since it has been determined that the injurious factor lies much less in the antitoxin than in its seral menstruum, derived from an animal (horse, etc.) of foreign species, an injection should contain the greatest quantity of antitoxin in the smallest volume of serum possible. If a tense edema develop at the site of injection, it is a signal for cessation of the procedure. Intravenous injection, commended by many authors, is emphatically denounced by Dr. Scheidemantel, whether it be an initial dose or a dose in repetition.

NASO-PHARYNGEAL TAMPONS.—According to Mayer, tampons in this region, and particularly the Belloque tampon deserve close watching. They

should be not only sterile but antiseptic, avoiding such cauterizing agents as ferric chloride. Indications for removal, in general, is the formation, within the bleeding vessel, of a solid thrombus, commonly within three days, occasionally five days. Whether the tampon should, or not, be removed, depends, according to Mayer, upon the appearance of the eardrum, particularly the case where a Belloque has been used. A Belloque always causes a slight tympanitis; where this hyperemia rapidly loses its innocence, and the swelling becomes marked, there should be no delay in removing the tampon.

POSTPARTUM HEMORRHAGE.—In a case of Dr. B. Kroning, where a dangerous postpartum flow occurred an hour after the birth, a fairly long tube, such as is used ordinarily for vaginal irrigation, etc., was drawn, with increasing tension, the femoral pulse serving as indicator (no anesthetic being employed), about the waist of the patient until the femoral pulse was obliterated. Only at the beginning of this compression was there any trouble, viz., slight dyspnea. The hemorrhage immediately ceased; then, after a minute or two, blood issued from the genital tract, coming, however, from the hitherto flabby uterus, now firmly contracted. By pressure upon the uterus, the placenta was easily expelled. The woman recovered rapidly, and the rubber tubing, which had been in position for five minutes, was carefully and slowly removed. The uterus now became somewhat softer, but there was no further bleeding. Though a valuable addition to therapy, the author notes its occasional failure, and, suppositious lesions due to its use. In these last instances, Kroning, in spite of the disappearance of the femoral pulse, declares that the tubing must have been incorrectly applied, for, when the femoral pulse is actually cut off, further arterial bleeding is impossible. If, however, the procedure fail absolutely in postpartum hemorrhage, time, at least, has been gained the physician for careful disinfection of his hands, followed by a thorough tamponing of the uterus.—*Deutsche med. Wochenschrift*, 1909, No. 46.

PRIMARY PYELITIS.—Dr. Saalhoff (*Munch. med. Woch.*, 1909, No. 44) ascribes to Lenhartz the differentiation of a primary pyelitis as well as a secondary, a primary (generally acute) inflammation of the pelvis of the kidney. In 80 cases, the characteristic morbid syndrome was described, and his data were confirmed by Scheidemantel, who stated that in none of his 16 cases had the correct diagnosis been given. The keynotes diagnostic of the morbid condition are brief, viz., its occurrence chiefly in females, and often in connection with the menstrual period; its commencement most often sudden, with high fever, also chills; spontaneous pain on pressure in the renal area affected, often with symptoms of peritoneal irritation particularly in circumscribed areas of the abdominal wall; turbid urine, in which bacteria are demonstrable culturally and microscopically. The fever is, commonly, continued but brief, with descensions by crisis or by lysis; sometimes the febrile period may be greatly extended. There are frequently relapses, generally at the menstrual epoch. As a bacterial accompaniment to this morbid condition, the *B. coli commune* is practically constant and alone. The author, in two cases, located a most minute

bacillus, gram-negative and growing only on blood serum, and then sparsely. This micro-organism most resembles the *B. influenzae* and doubtless belongs to the influenza group.

SYSTEMIC SWELLING OF LYMPH-GLANDS IN ROTHELN.—Drs. Hamburger and Schey call attention to a systemic adenitis in German measles or Rotheln, scarcely mentioned by other observers, who confine themselves to tumefaction of the glands behind the ear and the cervical. Gerhardt and Jurgensen mention axillary and inguinal glands. In this year's epidemic (Vienna) there was, almost without exception, a systemic swelling of lymph glands, including not only submaxillary, cervical, inguinal and axillary, but also cubital and thoracic. They were found also in children whose environments declared an imminent infection, the glandular swelling becoming a valuable prodromal indication.—*Munch. med. Woch.*, 1909, No. 45.

PATHOLOGY OF THE VEGETATIVE NERVOUS SYSTEM.—In many persons the equilibrium which should exist between the two visceral systems of nerve substance, the vagus and the sympathetic, can be disturbed. In such individuals, the autonomic system responds more readily to simple stimuli, and often permits the discovery of latent disturbance of function, which would be denominated as stronger vagus response to stimulus, were they greater in degree. Individuals of such type are apt to respond to relatively slight stimulus in the vagus sphere with disproportionate, too great action. Such individuals might be called vagatonic. In investigating the opponent action of adrenalin and pilocarpin, the interesting fact has been noted that most persons examined have been either vagotonic or sympathotonic in type, at least in so far as sweat and salivation are concerned in one group, and, glycosuria in the other. Also, none were found giving as strong a reaction to the atropin-pilocarpin as to adrenalin, or *vice versa*. Furthermore, it was shown, that the individuals which, according to the pharmacologic method, belonged to the vagotonic class, in other regions, likewise governed by the autonomic system, showed an increased irritability of their system, so that, apparently in most of the subjects experimented, a dominant vagotonus was present. The greater number of these observations were made upon youthful subjects. Perhaps vagotonus is a physiologic attribute of youth, even as sympathotonus seems to be a characteristic of persons of greater age (increase of pressure, tendency to alimentary glycosuria, atonic constipation, decreased acidity of the gastric juice). Further investigation, however, is needed to demonstrate the degree of participation in a common source or root possessed by the lymphatic constitution and a latent vagotonism.—Drs. Eppinger and Hess, *Zeitschrift für klinische Medizin*. Bd. 68, H. 3 and 4.

ERYSIPELATOUS INFECTIONS OF THE EYEBALL FOLLOWING OPERATIONS.—The author had a sad experience following the Hess operation for a partial ptosis of rather minor grade. A slight swelling of the wound edges appeared on the third day, and became much worse the following day, with board-like hardness of the skin. On the fifth day there was a great discharge of pus from the palpebral fissure. The following day it was pos-

sible to explore the eyeball. He found a perforation 1 cm. long, extending along the outer corneal margin, with lapsus of the iris. There was a second abscess in the sclera. The pus poured out of the eyeball for ten days, when he decided to perform a plastic operation to close the defect of the cornea. It was necessary first to remove the dislocated lens and abscise the prolapsed iris. The flap did not unite immediately, but upon its replacement later it became fixed. The final result was that the eye became quiet, with good light projection. The author believes that the streptococci infection emanated from the nasal secretion.—Dr. E. Cramer, *Annals of Ophthalmol.*

WILLIAM SPENCER, M. D.

THE TUBERCULOSIS OF CONJUNCTIVA BULBI AND ITS DIAGNOSTIC DIFFICULTIES.—The author states that tuberculosis of the conjunctiva bulbi without involvement of the conjunctiva of the lids is a rarity and presents great diagnostic difficulty. He reports a case occurring in a thirty-year-old woman, in whom the growth had first presented itself five months before. The tumor was situated near the lower outer limbus and was half the size of a hazel nut. It was diagnosed as a malignant growth and removed with a lance-shaped knife from the sclera. The latter was very thin and in part was destroyed, showing a 2 mm. opening, through which the ciliary body protruded. A fine probe was passed into the anterior chamber, causing hemorrhage, showing iridodialysis. The microscopic examination of the growth showed a number of nodes, the centers of which showed a tendency to necrosis, and were surrounded by epitheloid and lymphoid cells. Giant cells were few in number. Between the nodes there was a dense, small-celled infiltration. Under tuberculin treatment (bacillus emulsion) the wound healed completely without the use of suture, and the eye returned to normal. Locally, iodoform was used.—Dr. R. Kramer, Vienna, *Annals of Ophthalmol.*

WILLIAM SPENCER, M. D.

THE DIFFERENTIAL DIAGNOSIS BETWEEN OCULAR HEADACHES AND THOSE PRODUCED BY INFLAMMATION OF THE ACCESSORY SINUSES.—Snydacker believes that in from 7 to 10 per cent. of the cases of headache and asthenopia which come to the oculist for operation the symptoms are due to inflammation of the accessory sinuses. Such headaches are unilateral and neuralgic, appearing suddenly and violently, occurring regularly; often accompanied by outflow of pus from the nose or associated with distinct polypoid and hypertrophic changes in the nose. They are often produced by an attack of grip or coryza, and pressure over the frontal or maxillary sinuses show great tenderness. The use of adrenalin in the nose relieves the headache, and X-ray examination may show the presence of pus in the cavities.—Dr. E. F. Snydacker, *Annals of Ophthalmol.*

WILLIAM SPENCER, M. D.

CONCERNING THE TRACHOMA BODIES.—Gotfreund examined 106 trachoma cases for the trachoma bodies. In 47 the results were positive; in 22 papillary trachoma, the trachoma bodies were found in 17 cases; in 84 granular trachomas in 30 cases; thirty of the positive cases were found

in the cases of acute trachoma. He found the most characteristic appearance to be the half-moon or sickle-shaped intracellular groups—quite characteristic were also large, distended, epithelial cells closely packed with these bodies. These were always found in epithelial cells, never in the leucocytes. He holds faulty technic or inexperience in knowing what to look for responsible for the many negative results obtained in the beginning. Whether these bodies are parasites or represent a specific cell degeneration are questions still undecided. Their occurrence in acute trachoma is certain, although further investigation are necessary to determine whether the Prowazek bodies are specific for trachoma.—F. Gotfreund, *Annals of Ophthalmol.*

WILLIAM SPENCER, M. D.

THE TREATMENT OF PUERPERAL FEVER.—From his own experiments and from those of others, Meissel believes the possibility exists of immunizing patients by means of the blood of a patient who has withstood a streptococcus infection, and perhaps also to render harmless an existing infection. From these premises 16 puerperæ infected with streptococcus were treated with the serum from convalescents, about 20 c.c. being injected subcutaneously. In those cases, six in number, where the disease was confined to the uterus the serum exerted a favorable influence, the germs disappearing from the blood after the injection. No effect could be demonstrated in those cases where inflammations around the uterus complicated the case.—*Abs. in Zentralbl. f. Gyn.* 1909, 1513.

THEODORE J. GRAMM, M. D.

ACCIDENTS FROM LUMBAR ANAESTHESIA.—Risch from v. Franque's clinic says: Although almost ten years have passed since Bier published his first articles on lumbar anæsthesia and although in the meantime lumbar anæsthesia has been used in many thousand cases, mostly with good results, still Bier declared at the congress of surgeons this year that lumbar anæsthesia has not passed much beyond the experimental stage, and we must count upon one death in every 400 to 500 cases.

At the clinic above named this method has been used in many cases, and usually gave satisfaction, but lately one case was encountered in which as the abdominal section was about completed the respiration suddenly ceased, and only after considerable difficulty was the patient saved. Some time thereafter another accident, similar in character, occurred, which ended fatally; and later another death had to be recorded.

It is of course quite interesting to read the account of the far-reaching attempts to find an explanation for these accidents, but the fact remains that in this method of anæsthesia we are dealing with a highly dangerous procedure. The author concedes as much, and concludes his article by saying: At all events in lumbar anæsthesia we do not possess a method of choice; we may only use it in certain favorable cases.—*Zentralbl. f. Gyn.* 1909, 1043.

THEODORE J. GRAMM, M. D.

INTRAUTERINE TROPHONEUROTIC SKIN DISEASES.—Sieber reports two cases. He says it is rare to find in the new-born nonsyphilitic changes in

the skin, and they are almost always regarded as pemphigus depending upon infection. Two years ago Labhart and Wallart collected 13 non-infectious cases from the literature and added three of their own. This author recites two cases observed at birth which are accurately described and illustrated, and were fully examined so as to exclude the belief in their infectious character. In one instance the lesions were situated on the dorsal side of both forearms. On the left forearm in a line from the elbow joint to the dorsum of the hand there were still to be seen the remains of two confluent and almost healed lesions, and two other recently and almost healed lesions, and two other recently discharged and drying bullæ, in addition to another oval lesion still retaining yellow serous fluid, devoid of inflammatory surroundings. Upon a corresponding place upon the right arm two similar lesions were noted, which had already become dry. According to the location these lesions were situated in the region of the radial nerves.

In the second case reported, the lesions were situated above and behind the right ear and consisted of a surface studded with vesicles. These were arranged in a circular figure, in the middle of which the scalp had a hard feel. The vesicles were about the size of a pin head, having a red surrounding, and filled with a yellow serous fluid. One evacuated vesicle was covered by a yellow scab. Upon a corresponding place on the other side of the head a similar but smaller patch existed, covered by fewer and smaller vesicles. The affection suggested herpes zoster, but the bilateral occurrence was noteworthy. The site of this lesion is supplied by the occipitalis minor nerve. In both of these cases the eruption rapidly disappeared without further symptoms. As already stated, the author ascribes the cases to trophoneurotic causes.—*Arch. f. Gyn.* Vol. 88, 465.

THEODORE J. GRAMM, M. D.

THE TREATMENT OF PLACENTA PRAEVIA.—From his own experience and as the result of an inquiry among a number of practitioners, Hammer-schlag reaches the conclusion that placenta prævia occurs much more frequently in general practice than in clinics; expert assistance is so rarely called early in these cases that their removal to the hospital for the Cæsarian section is not possible; on the other hand he believes that the systematic treatment by the Cæsarian section would not materially improve the maternal mortality over that attained by other treatment now used.

Of the vaginal tamponade he says, the method is associated with much danger from infection, while its advantages do not compensate for these dangers; so that he is not inclined to recommend this treatment. Combined version is an easily performed and certain procedure in the interest of the mother, but is attended by bad results for the child, he would therefore recommend it in all cases where the child is dead or cannot live. Metreuryse gives good results for mother and child. For its use alone there are, however, some practical objections among which are the longer continuance of the labor and the necessity for several manipulations about the genitals. The author recommends it in the presence of a living child or one capable of living.—*Monatsschr. f. G. u. G.* Vol. 30, 101.

THEODORE J. GRAMM, M. D.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY A. LEIGHT MONROE,

Miami, Florida.

HOMOEOPATHIC REMEDIES IN GYNAECOLOGY.—In October (1909) *Medical Counselor*, Dr. C. B. Kinyon, under the caption, "Medical vs. Surgical Gynæcology," gives the following list of indications for the use of homœopathic remedies in gynæcological diseases: The list is long, but Dr. Kinyon's extensive experience is mirrored in them, they are original and practical and should have wide circulation amongst young practitioners:

In the time at my disposal, I will give a list of remedies which I have found from actual experience, to be of value in the treatment of the chief troubles encountered in the practice of so-called medical gynæcology.

I wish at the outset to say that the list I give and the indications are by no means exhaustive and are not alone such as we find in our text-books on materia medica or theory and practice, but are taken from all sources together with my personal experience and observation.

Aconite. Sudden suppression from cold (chill), fright, or anger (this is a very important cause), coupled with congestion of all the deeper structures of the body. Acute ovaritis with severe pain. Patient very restless, very anxious; fear of death or that an incurable condition being fastened upon her. I now recall a case where the mother nursed her babe soon after a severe fit of anger and the child died in convulsions within two hours. Had the mother taken a few doses of aconite before nursing the child the result would not have been so disastrous. These cases are generally troubled with frequent and painful tenesmus of the bladder, but urination is not painful. This remedy must be given at once and, in very severe cases, frequent doses of the 2x. As a rule a dose every 15 minutes for about two hours, when the above symptoms will all be controlled. If these cases are not treated in the early stages *Senecia* will be the remedy.

Amm. carb. 6x. Flow too early, too weak and of short duration, more free at night. Blood is too dark and clotted. Colicky pains. Severe pains in the back extending through the uterus. Grumbling toothache with profuse watery stool.

Arsenicum. For a depraved state of the system from exhausting diseases. Its pathognomonic symptoms are too well known to require repetition.

Belladonna, 3x. This is a uterine polychrest and has such characteristic and well known symptoms that but few need be mentioned. The flow is scanty, in plethoric women, with the characteristic symptoms, flushed face and throbbing carotids. (glonoine, pale face). Hughes says the above symptoms call for *Belladonna* during the intermenstrual period and *Aco-*

nite at the time of the flow. The following are perhaps worthy of mention: Drawing pains within the pelvis and along the thighs; profuse sweat just before the flow, accompanied by coldness and wakefulness.

Berberis vulg. 1x. A greatly neglected remedy in pelvic trouble. The flow is too scanty, blood watery and slimy and greyish in color. Irritating; bad odor; severe labor-like pains in the lumbar region. Bursting headache, relieved by tight bandaging; especially indicated when there are troubles of the liver and kidneys.

Bry. Too early, too profuse, dark red, with a splitting headache on the vertex, aggravated on motion; flow also aggravated on motion.

Cal. carb. 6x. This is a uterine polychrest. During the intermenstrual period we have a profuse, milky leucorrhœa. Menses appear in nursing women. Great remedy in scrofulous diathesis. Fleishy women, fair-skinned, but muscles weak, abdomen too large, excessive perspiration about the head during sleep, stomach acid, bowels constipated, and some of our best authorities claim that it is our chief remedy in cases of amenorrhœa, with a tendency toward tuberculosis. Of great value indeed in cases of irregular menstruation associated with heart diseases of reflex origin.

Caulophyllum, 1x. (Blue cohosh). Pains more sharp and unendurable than in *cimicifuga*. Patient cannot endure the pain, is almost frantic and even delirious at times. Pains are not so constant and not so much of a rheumatic character as in *cimicifuga*.

Chamomilla. 2x-6x. Before menstruation very irritable. Snaps at everybody and can hardly keep her temper. Flow dark and clotted. Metorrhagia coming in paroxysms. This discharge is apt to follow after a miscarriage or labor.

China. 2x. Too early and too profuse menstruation. Menses frequently suppressed from disappointment or chagrin. In case of anemia it is given between the menstrual periods. Of course almost specific in malarial cachexia.

Crocus. 3x. The menstruation is too early, too profuse, dark in color. A feeling as though the menses would make their appearance for several hours before their time. Sensation as though something alive were moving about in the abdomen. Quite frequently called for during the change of life. Differentiate this from *Sabina* with care, as they have points in common.

Cimicifuga (black cohosh or squaw root). Uterine polychrest. I might perhaps say that this is more frequently called for in dysmenorrhœa than almost any other remedy in the materia medica, much oftener than *puls.* or *Senecia*. These three are the great triumvirate. Indicated in nervous women of rheumatic diathesis with neuralgia, myalgia, occipital headache, flashes of heavy pains through the lower abdomen and pelvis. These pains continue for some time but are not sharp as in *caul*. Very severe, heavy pains in the head and eyeballs and other parts of the system. The flow irregular or suppressed from general cold or strong mental emotion. Severe neuralgic pain in the uterus and ovary; pains extend from side to side, are sometimes dull in character and produce great soreness or tenderness of the parts; severe bearing-down, dragging sensation in all the pelvic organs.

Cocculus, 3x. Flow too early, abdomen greatly distended, with contract-

ing, cutting pain and soreness upon pressure. Menstruation may appear after being absent for months, but the menstrual molimen is present at each month, often so severe as to lead to mania. Flow scanty, painful, irregular, often properly classed as dysmenorrhœa, with clotted blood associated frequently with hemorrhoids. In these cases better than Aesculus. Cramps in the uterus, with a sero-purulent bloody flow with bad odor.

Conium, 3x. Similar to *Cocculus* except that it has labor-like bearing-down pains at the time of the flow. Sometimes colicky pains. Vaginal discharge very excoriating and whitish in color. Breasts sore, hard and painful. Burning, soreness, and aching pain in the uterus.

Glonoine, 6x. Severe, throbbing headache with a pale face. (Bell. flushed.) Cerebral congestion is intense, but pain continues after the flushing and headache is relieved. Acts quickly if at all. Often very valuable during the climacteric.

Graphites, 6x. Another much neglected remedy in cases of a tardy flow, scanty and pale. Patients past thirty years of age. Ovaries tender and indurated, with inveterate constipation. (Hahnemann). Stools hard, lumpy, dark, half-digested offensive. *Mixed with mucous threads and surrounded by a coating of mucus.* The skin symptoms are similar to other conditions calling for graphites. Patients tend to obesity and the conditions are chronic.

Gels. 1x. Is indicated where we have the characteristic headache beginning in the occiput and extending up over the head, with the characteristic pressure-like symptoms.

HELONIAS 3x. Flow too frequent, too profuse, very exhausting. Menstruation premature and profuse in women who are feeble from loss of blood. Flow is passive, dark, coagulated, and offensive, accompanied by heaviness, languor, drowsiness, and albuminous urine. Where this albumin becomes quite extensive the flow is scanty and there is evidence of marked congestion of the kidneys. During the menopause we have profuse flooding with severe pain in the uterus and ovaries. Perhaps the greatest keynote for this remedy associated with the above is the feeling of great lassitude, marked tendency to prolapse of the uterus and often accompanied with ulceration of the cervix, accompanied with a profuse serous leucorrhœa. Two classes of women for which this is indicated—those who are worn out with hard work, cannot sleep, feel better when their attention is engaged with work, and those who are enervated by indolence and luxury and consequently suffering from atony of the pelvic organs and tissues.

Hydrastis, 2x. This remedy is indicated more for diseased conditions manifesting themselves between the menses than for disorders of menstruation. Immediately following menstruation, leucorrhœa is like the white of an egg, very profuse and debilitating. This is soon followed by a tenacious, viscid, thick, yellow leucorrhœa, either vaginal or uterine. This may be so tough as to hang in a long string from the os. This is frequently accompanied by great sexual excitement and severe itching, often associated with hepatic derangements and severe constipation, with a feeling of prostration at the epigastrium, with violent, continued palpitation of the heart. General engorgement of all the pelvic organs. In these cases we have some valuable concomitant symptoms. She is forgetful, sleep is very restless, she is frequently awakened by backache and dull

pains in the region of umbilicus or hypogastrium. Dull, frontal headache, with dizziness, almost as if intoxicated. Very severe nervous, sick headache. Cough, with expectoration of thick, yellow, stringy mucus. General nervous prostration.

Ignatia, 6x. Menstruation too early and too profuse. Discharge of black blood mixed with coagula and offensive odor, especially apt to occur after great mental trouble. The first few days the flow may be scanty, but it then is very offensive in character. Before menstruation she is extremely nervous, sobbing and sighing, giving one the impression that she is full of suppressed grief; great heat and heaviness in the head. Severe headache, restlessness, with moaning and groaning while asleep; sudden starts during sleep; nervous headache, aggravated by stooping; especially severe just above the root of the nose. Intolerance of bright light or of loud noise; tickering before the eyes. Toothache, with severe aggravation after drinking coffee. Numbness in the arms at night, with the sensation of something alive running over the arms. Hollow, spasmodic cough, excited by a sensation as of sulphur or dust in the room.

Ipecac. A continuous flow of bright red blood, with cutting pain about the umbilicus; pressure in the uterus and rectum; hemorrhage following confinement or miscarriage—especially does this occur soon after the delivery of the placenta.

Kali. Carb. 6x. The earlier practitioners of our school very frequently used this in place of pulsatilla with marvelous results in many cases. Menses do not appear at puberty; when they do appear they are apt to be too scanty, with a pungent odor, acrid, causing eruption on the thigh. When the courses are suppressed the patient has ascites or anasarca. Even when these have been existing for a considerable time *Kali Carb.* if given faithfully will frequently remove these conditions and re-establish the menstrual function and bring about a very satisfactory degree of health. This I know to be true from actual experience in many cases, especially in young women. It is truly astonishing the marvelous results following the administration of this remedy. One very valuable symptom is the presence of a sack-like swelling between the eyebrows as well as beneath the lid. Very susceptible to cold (*Hepar Sulphur* 6x from a draft on the back of the neck or head). Sharp, sticking pains, worse at 3 a. m. *Lycopodium*, worse at 4 p. m. Dry, hacking cough, with great weakness and excessive metrorrhagia following confinement or miscarriage. Will frequently prevent an impending abortion where there is pain in the small of the back as if it were being pressed in from both sides. Abortion more apt to occur at the end of the second month. *Sabina* at the end of the third month, and *Sepia* after the fifth month. There is great constriction in the region of the heart, with intermission of the heart beat. The back feels as if broken. Pains wander quickly from one place to another, causing her to start or jerk.

Lachesis. Menstruation scanty. Regular as to time, but too feeble and of too short duration. Dark, lumpy, or acrid in character. (This is one of the three great remedies indicated in the climacteric, the other two being *Sepia* and *Magnesia Phos.*) All the symptoms are worse after sleep, more especially after a nap in the day time. The chief symptoms for *lachesis* are so pathognomonic and so well known as to need no repetition,

and yet I can hardly resist giving you one symptom which has helped me so many times—viz., a feeling of constriction as though a large fold of cloth were drawn snugly about the throat. I look upon this as *the* keynote of lachesis.

Lilium tig. The chief action of lilium is upon the ovaries. For ovarian neuralgia it is the greatest remedy we have. The pains are sharp and lancinating in character. Pains worse in the left ovary, frequently extending up to the left mamma. Great bearing-down in the whole uterine region, with a sensation when standing on the feet as though all the pelvic contents would issue from the vagina. This can only be relieved by firm pressure with the hand against the vulva or by sitting down. All the pelvic organs seem swollen and tender. These symptoms are aggravated when walking. One of our great remedies for prolapse of the uterus.

Lycopodium. Chronic suppression of the menses, with accompanying sadness and melancholy. With a feeling of distension in the abdomen. Menses suddenly suppressed by fright. Pains from right to left. Severe bearing-down as though the menses would occur. Always worse from 4 to 8 p. m. A sallow complexion, blue circles around the eyes, with heart-burn and great distension after eating. Rumbling, gurgling noise in the abdomen, so loud as to be heard by those near-by, to the great annoyance of the patient.

Magnesia Phos. Menses may be too frequent and too profuse. When it is thick and dark in character, more abundant at night. Frequently suppressed altogether during the afternoon. Drawing pains in the head and also in the region of both ovaries. As in lachesis, we have the sudden flashes of heat accompanied by dizziness. As before stated, a great remedy during the change of life.

Natrum mur. 6x-30x. First flow is much delayed, constitution undermined from excessive use of drugs or from malarial poisoning. Patient depressed, more in the form of melancholia than of hypochondriasis. Patient is constipated, emaciated, easily fagged out. Before menstruation patient is very sad indeed, with great anxiety. During menstruation is gloomy and anxious. Violent headache on waking in the morning. After menstruation patient is hasty and irascible. Bearing-down as though the uterus were prolapsed. Pimples on different parts of the body, with falling out of the hair. The headache of school girls. Awake in the morning with headache, unrefreshed. Chlorosis in young girls. Chief keynote symptom is a feeling as of a plug in the throat. Palpitation of the heart upon the least exertion or when lying upon the left side. May lose flesh and the pallor increase, even though the appetite remains good. Especially indicated in cases coming from the old school, where they have used nitrate of silver locally.

Nux Vomica is so well known that little need be said, but something should be said, I think, regarding *Nux Moschata*. Menses irregular, both as to time and to quantity. Discharge is dark and thick, whether in amenorrhœa or in menorrhagia. Unconquerable drowsiness. Cannot sleep well. Great lassitude with a great tendency to excessive laughter, especially when in the open air. This remedy is frequently called for in hysteria, where ignatia is administered.

FOREIGN LITERATURE

CONDUCTED BY E. FORNIAS, M. D.

ETIOLOGY OF PELLAGROUS INSANITY.—The old doctrine of Prof. Lombroso, who, with his wonted acumen, noticed the genetic connection between the use of *diseased maize* and the development of *pellagra*, a doctrine confirmed by the studies of Bordoni, Uffreduzzi, Sepille, Sormani, Monti, Pellizzi and Tirelli, Gosio, Ferrati, Antonini and others, has quite recently found confirmation in the interesting researches of Ceni and Besta in the *Phreniatric Institute of Reggio Emilia*. These last two investigators undertook a systematic examination of all that had a bearing upon the genesis of *Pellagra*, and they found that amongst the diverse *fungi* growing on what we call *diseased maize*, the two most important were the *Penicillium glaucum* and the *Aspergillus fumigatus*. Of the former they have studied two varieties—*a* and *c*. The *chronic variety of pellagra* of a depressive character, and without phenomena of excitement, would coincide with the variety *a* of *Penicillium glaucum*. With the variety *c* there would coincide the sub-acute forms in which, though we have the presence of *psycho-motor* excitement not very intense, a slight spasmodic state of the musculature, exaggeration of the reflexes, and spastic paraparesis, as well as muscular tremors, yet there are absent true subsults, and the tetanoid rigidity of the muscles which are characteristic of *pellagrous typhus*, which should be attributed to the *aspergillus fumigatus*. Ceni and Besta reject the theory that the morbid phenomena are produced by phenol compounds, such as they produce in culture media, and they support the hypothesis that the toxic principles are due exclusively to the germ (*spores and mycelia*). They conclude that both the *Penicillium glaucum* and the *Aspergillus fumigatus* play a very important part in the etiology of pellagra, and that their action can be explained only by their determining phenomena of progressive intoxication by means of the toxines they set free in the gastro-intestinal canal.

In the case of the *Aspergillus fumigatus*, Ceni's idea is that we have to deal with an infection rather than an intoxication, a fact that would also be proved by the mode of commencement and the course of *pellagrous typhus*, which have all the characteristics of an acute infective process, and not of an intoxication. In any case we have to deal with a disease produced by food stuffs (bread, cake, poleno) made from diseased (mouldy) maize. —*Tex. book of Psychiatry* L. Bianchi.

PELLAGROUS INSANITY is a disease arising from intoxication of the nervous system. It is confined to certain regions of Italy, Greece, Roumania, Russia, Bulgaria and other countries. It is more common in Italy than elsewhere, and is there limited to Northern and Central Italy, more especially the region of Venice, Emilia, certain frontier provinces, Umbria, Tuscany, and other districts of the valley of the Po. It is almost unknown in the south of Italy. Only a few cases of it have been observed there, as, for example, these described by Venturi.

SYMPTOMATOLOGY.—Speaking generally, the disease appears in spring,

but more frequently in May and the beginning of June. It is ushered in with vague general symptoms—weariness, loss of energy, heaviness of the head, and general depression. Soon there appear dryness of the fauces and mouth, intense thirst, and difficulty in swallowing. Vague pains in the limbs and back, paresthesias, humming in the ear, and especially vertigo, give rise to a pronounced feeling of malaise. This train of symptoms very soon becomes associated with an *erythema* of a dark red color on the exposed parts of the body—the face, neck, hands—and small bullæ often appear at some points of the erythematous surface. The patient complains of itching in the erythematous parts. These soon become covered with small scales, which are continually falling off and forming again, like small powdery lamellæ and on the neck, being limited to the exposed part, they give rise to a contrast in color, resembling a collarette, which has been described as the *pellagrous collar*. Sometimes, instead of scales, crusts form. In addition to this special dermatitis, there soon occur noises in the head or in the ears, vertigo, prostration of strength, cramps and pains in the limbs. In a short time there are added to the initial want of appetite, pains in the stomach, abdominal cramps, pyrosis, (paragensia), and diarrhœa. The prostration increases, and signs of *melancholia* and *dejection* appear. In some cases there is also a troublesome and painful stomatitis, with erythematous or aphthous character, perverting the sense of taste, so that to the patients all things are salt or bitter, for which reason the Venetians called the malady “*salt disease*.” The intense thirst is complicated by a feeling of insatiable hunger. In some cases the disease runs a febrile course.

The *nervous phenomena* dominate the scene in *pellagra*. We may classify the different varieties in two groups—*chronic* and *acute*. The former is characterized by *general depression*, *progressive wasting*, *melancholia*, *confusion*, *slow dementia*, *paraesthesias*, *alterations of motility*, *ataxic gait*, *gastro-intestinal disorders*, *obstinate diarrhoea*, and *nephritic albuminuria*. In this group contractures and subsulti are absent, although in most instances the reflexes are exaggerated. In the *acute varieties* we have rapid elevation of the temperature, which may reach 39 degrees and even 41 degrees C. In the *motor sphere* we observe: *intense neuro-muscular excitement*, *sub-sulti*—spontaneous or provoked—*contractures*, *muscular rigidity*, more marked *exaggeration of the tendinous reflexes*, more pronounced *confusion*, with *phases of exaltation*. Sometimes this acute form, which has also been called *pellagrous typhus*, develops in the chronic patients. Between the two groups we find numerous intermediate forms, in which we notice a great variety of psychic phenomena, and also alternations of excitement and depression. In all, however, the characteristic features are, on the one hand, the *erythema*, on the other the confusion and the slow mental enfeeblement. Phases of remission and also of apparent recovery are observed in the course of the disease, especially in certain seasons, a fact that very probably has some relation to the phases of life of the fungi, which appear to give rise to it.—*Bianchi. Trattato di Psichiatria*.

PATHOLOGICAL ANATOMY OF PELLAGRA.—In addition to the cutaneous alterations, consisting in a more or less extensive atrophy of the layers of the epidermis and the true skin with thinning and sclerosis of the skin,

and those found in most of the organs, especially the intestine, the serous membranes and the kidneys, by Vassale, and produced experimentally by Ceni, I must make special mention of the alterations of the abdominal sympathetic system (Babes and Fox), and the parenchymatous neuritis found by Dejerine. In the brain we find thickening, turbidity and often adhesions of the meninges, atrophy and induration of the cerebral substance, increase of the subarachnoid fluid, profound alteration of the cerebral cells, and increase of the neuroglia. In acute cases the usual cell-alterations are those found in other acute forms of psychosis. In the spinal medulla lesions are found in the various bundles (Tonnini), just as in progressive paralysis. In one case the pyramidal bundles are most affected, in another the sensory bundles, in a third the central substance. Belmondo (*Riv. Sper. di fren.*, 1889-90) found degeneration of the pyramidal bundles of various intensity. Babes and Sion found lesions closely resembling those of tabes, such as degeneration of the posterior roots and columns. These lesions are more frequent in the cervical segment. In the chronic form running a slow course the *anatomico-pathological alterations* are thus very similar to those of progressive paralysis and of tabes dorsalis (*Bianchi. Trattato di Psichiatria*).

THErapy OF PELLAGRA.—We must concern ourselves, says Bianchi, with the prophylaxis rather than the cure of pellagra, which may be regarded as a disease associated with poverty. It reveals, indeed, a painful state of affairs to say that in precisely those regions in Italy where the people are fairly comfortable as compared with other districts, or have become so in the last forty years, comparatively little has been done to get rid of this scourge. If the doctrines of the toxic or infective *genesis of pellagra* are true, as cannot be doubted, it would be quite sufficient to prevent the use of diseased maize in the regions most afflicted.

Urgent provisions are required when we consider the figures of the *victims of pellagra*. In the frontier districts alone the *mortality for pellagra* in the triennium 1887-89 reached the figure of 1,481, and in the triennium 1895-97, the figure of 1,960. In the same periods of time the *pellagrous insane* were respectively 1,627 and 1,138. Quite as discouraging are Agostini's statistics of pellagra in Umbria.

On the one hand, we ought to advert to the best mode of preparation and preservation of the maize, and, on the other, we should oblige people in the country to use bread made from grain instead of maize. This is a matter that should be taken up by the Government, societies of public health and improvement, and by the land owners. The price of maize differs greatly from that of grain, but when we think of the enormous difference between the nutritive power of the two cereals, I believe that, with a little tact, we could secure a complete victory for civilization, animated and urged on by scientific researches.

The difficulties in our way are less formidable than in the case of malaria, syphilis and alcoholism. *Pellagra* is one evil which, given the seriousness of our cognitions, should disappear at no very remote time (*Bianchi. Trattato di Psichiatria*).

THE HAHNEMANNIAN MONTHLY.

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SOME SUGGESTIONS TO THE GENERAL PRACTITIONER CONCERNING THE SUBJECT OF RHINOLOGY.

BY

GEORGE W. MACKENZIE, M. D., PHILADELPHIA, PA.

(Read before the Philadelphia Academy of Medicine.)

TO-NIGHT I will say something that I have ventured before only in private, and for doing so I may be accused of being impolitic or of telling the truth too boldly, but beneath it all there is at least a spirit of honesty.

To begin with, I shall accuse the average general practitioner (present company excepted) of knowing but very little of the subject of rhinology. One of the proofs of this fact is shown by the lack of interest and the general dislike he has for the subject. Compared to its relative importance, the average general practitioner knows far less about this than he does of any other branches. The fault is not entirely with him or with the teachers, but with the management of our colleges for failing to realize the importance of the subject. Too little time is allowed the student for the study of the subject of rhinology. Take, for instance, the anatomy; the new graduate can describe the femur perfectly but is unable to describe a single bone which goes to make up a part of the nasal cavity; yet in practice he will meet hundreds of cases of important diseases of the nasal cavities to one fracture or disease of the femur.

Let me cite a more specific instance showing this lack of training in the subject. History from the records. One year ago a man, 47 years of age, called at my office, with the fol-

lowing history: An attack of severe bleeding from the nose two years before, a second attack two days ago.

Revised history of the patient, written by the patient himself, two days before he was presented to the Society:

“PHILADELPHIA, Feb. 14, 1910.

“DR. G. W. MACKENZIE,

“Philadelphia.

“MY DEAR DOCTOR:

“Being unaccustomed to making a public appearance, I am writing for you the facts of ‘my case’ up to the time that you took charge of it.

“For years I had been subject to nose bleed which became more frequent until hardly a day passed that a handkerchief was not soiled more or less. About five years since (during business hours) I experienced a hemorrhage lasting an hour and a half, losing approximately a quart of blood. A physician not being within call, ice was finally generously applied to head, neck and nostrils but the flow was not checked until the nose was plugged with cotton. The cotton was removed some four hours later, but when bathing the following morning the nose again bled, was plugged and some hours later a doctor cauterized the bleeding point.

“About two years later, upon returning from a card party at 1.30 A. M., I experienced a second hemorrhage of over an hour’s duration before a doctor could respond. After three-quarters of an hour’s constant application by him of a liquid substance on cotton the bleeding was checked and nose plugged. He suggested, at the time, cauterizing the whole inner surface of the nostril as the only method by which a further hemorrhage could be prevented. The morning following, the bleeding point, (a fresh one) was cauterized by my own physician, who suggested my having the nose treated by a physician who was considered a specialist. I was treated by said physician for several months—the treatment, upon each visit, consisted in the application of what appeared to be iodine and the constant use, through a vapor atomizer, of a prescription containing menthol and oil.

“The latter part of January, 1909, I contracted a severe cold, and upon reaching home, went to bed. At 6.30 A. M., I had a hemorrhage of the nose, lasting about thirty minutes, which stopped by clotting and I remained in bed; about 9 A. M., after a light breakfast, I had a second hemorrhage, lasting

about three-quarters of an hour, which also stopped by clotting. About 2 P. M., and immediately after eating a plate of soup, the third hemorrhage occurred. This lasted for nearly one hour before the services of a physician could be secured. It took him three-quarters of an hour to control and stop the flow by applying adrenalin. I was left with strict instructions not to move or talk until my own physician was able to call and attend to me.

"In the three hemorrhages I lost at least a pint and a half of blood. My own physician called between 7 and 8 P. M., plugged the nose, and urged upon me the necessity of an operation which resulted in my seeing you and obtaining permanent relief.

"I shall be glad to wait upon you at your office on Tuesday, February 15th, at 8.30 P. M., as arranged.

"Yours very truly,

"G. N."

He applied at one of the hospitals for treatment; the resident physician could do nothing. The resident called in one of the members of the medical staff who happened to be in the building, who attempted to stop it with adrenalin, but failed. After losing a large amount of blood and becoming almost exsanguinous, a gynecologist stopped it by the very simple surgical measure of producing pressure upon the bleeding spot through the introduction of gauze. I shall speak further of this condition later on.

The conditions which face the average general practitioner are:

1. Insufficient knowledge of the subject of rhinology to a marked degree, with the inability to recognize important diseased conditions when present.

2. Text books, a very few of which are excellent, but the vast majority of which are obsolete and extremely faulty, with entirely too many pages taken up with illustrations of atomizers, nebulizers, douching outfits, favorite prescriptions for the same; local applications, office outfits, obsolete instruments with the authors' and makers' names attached, etc.

3. Patented nostrums galore, samples of which are coming in every few days with an abundance of literature full of testimonials from unprogressive specialists.

4. Plenty of ignorant but confiding patients presenting them-

selves for treatment of apparently and really obstinate conditions.

These conditions naturally invite a *certain* number of the general men to practice humbuggery upon his confiding patients. He may do so unintentionally at first, but as he finds it pays commercially, it eventually becomes with him a fixed habit.

When I am asked what a general man needs most to help him in his general knowledge of rhinology, I answer :

1. A better knowledge of the anatomy of the parts.
2. More practice in the use of the instruments for the examination of cases.
3. At least one excellent, up-to-date text book upon the subject (I know of none better than Chas. Parker's).
4. To forget the bulk of what he thinks he knows concerning the application of drugs to the nasal chambers.
5. A better working knowledge of the materia medica.

With the time allowed me, it will be impossible even to touch upon these various issues; I shall, therefore, consider for the present, some features concerning the anatomy, and reserve for some other occasion a discussion of the other issues mentioned.

Let us begin with the septum (the median wall of the two nasal cavities). I have represented it here in a drawing. The great bulk of the septum is made up of three essential parts: (1) the vomer (plowshare bone); (2) the perpendicular plate of the ethmoid, and (3) the quadrangular cartilage. The lesser parts we shall not take time now to consider; however, they are represented in the sketch.

The superior horizontal dimension of the septum is considerably shorter than the inferior, approximately but one-half; the vertical diameter is a trifle less than the inferior edge.

The vomer is the thicker and heavier of the three parts and resembles remarkably in shape a plow-share; it articulates superiorly and posteriorly with the sphenoid, the rostrum of which fits into and between the two wings of the vomer. The posterior half of the superior inclined edge articulates with the inferior border of the perpendicular plate of the ethmoid and the anterior half articulates with the greater part of the inferior border of the quadrangular cartilage. Along the superior inclined border of the vomer is a groove into which fits the inferior borders of the perpendicular plate of the ethmoid and the quadrangular cartilage, as shown in the sketch—transverse section of the septum. The posterior edge lies free in the pos-

terior nares, viewed from the side it is concave posteriorly, and viewed from behind it makes a straight vertical line dividing the choana into equal halves.

The inferior border articulates with four bones; the posterior one-fourth with the median edges of the horizontal plates of the two palatine bones, and the anterior three-fourths with the me-

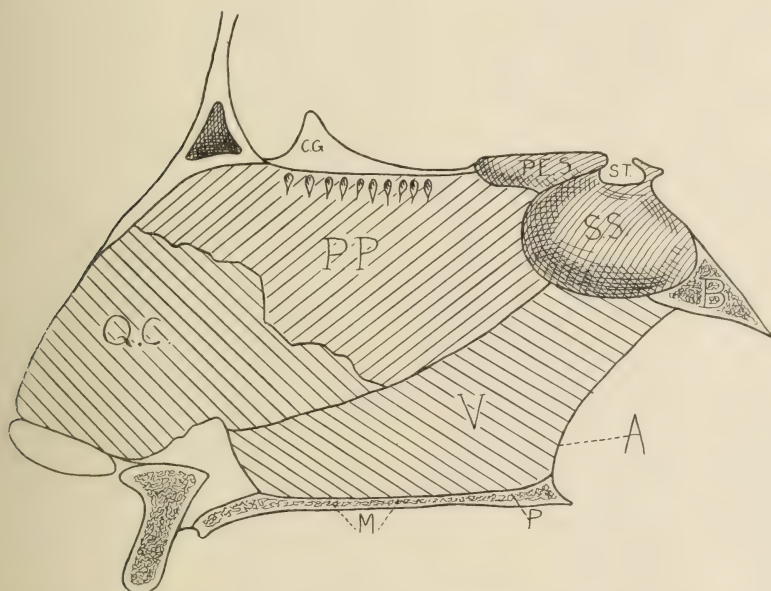


ILLUSTRATION I.—Fig. A represents a side view of the septum, showing the vomer V; the perpendicular plate of the ethmoid, PP; the quadrangular cartilage QC; crista galli, CG; the sphenoidal sinus, SS; one of the posterior ethmoidal cells, PES; the median edge of the palatine process of the superior maxilla, M. Fig. B shows skematically the Ethmoid bone, OB the olfactory bulb; EL, the ethmoid labyrinth; LP, the lamina papyracea; CG, the crista galli; PP the perpendicular plate in cross section; Figs. CCC, represent cross sections of the septum corresponding to the locations indicated by the vertical dotted lines in Fig. A.

dian edges of the two horizontal plates of the superior maxillary bones.

The perpendicular plate of the ethmoid is very thin as compared with the thickness of the vomer; it is more or less triangular in shape with the posterior angle truncated. This small posterior border articulates with the sphenoid. The superior border stops at the lamina cribrosa (horizontal plate of the eth-

moid) except for a small part anteriorly, which articulates with the upper half of the median borders of the two nasal bones.

The anterior border is irregular in shape, making a broken line, and articulates with the quadrangular cartilage in front. The inferior corner stops midway along the superior border of the vomer.

The quadrangular cartilage is thicker than the perpendicular plate of the ethmoid, but thinner than the vomer. I have represented these relative thicknesses in the sketch, showing the transverse section of the septum. This cartilage is more or less quadrangular in shape; its posterior border articulates entirely with the anterior border of the perpendicular plate of the ethmoid, its inferior border with the vomer, its anterior, with the lower half of the median borders of the two nasal bones and the soft parts below including the triangular cartilage and the plica vestibularis.

The septum is perhaps more frequently the site of trouble than any other part of the nose.

I. Both in frequency and importance, comes the deviations and spurs. I class these two conditions together because they are practically different manifestations of the same developmental process; of course, excluding the accidental cases of fracture. Fractures really form a separate and distinct class of cases. To aid the average general man to better grasp the subject of deviations and spurs, I shall cite but a single one of the many theories explaining its origin, that of extraracial marriages.

I understand from reputable authorities, who have made the investigations, that the pure races (Chinese and African Negro) are not subject to septum deviations; while all of us are aware of its marked prevalence among the mixed European and American races. This is not difficult to comprehend, for taking an exaggerated illustration; suppose a Hebrew with normally a deep nasal cavity and proportionately wide septum should marry an Irish lass with normally a short nasal cavity and proportionately small septum. It is natural to suppose that some of the resulting offspring should develop a nasal cavity whose dimensions would correspond with that of the mother; while the septum development would correspond with that of the father. The consequence is that the septum must buckle and give rise to a deviation or else it must pile up somewhere

(at the suture lines) and this is exactly what we find in our cases; *i. e.*, too much septum for the allotted space.

Again, the buckling or piling up takes place either along the line of union between the vomer and quadrangular cartilage (most frequent); between the vomer and the perpendicular plate of the ethmoid or between the perpendicular

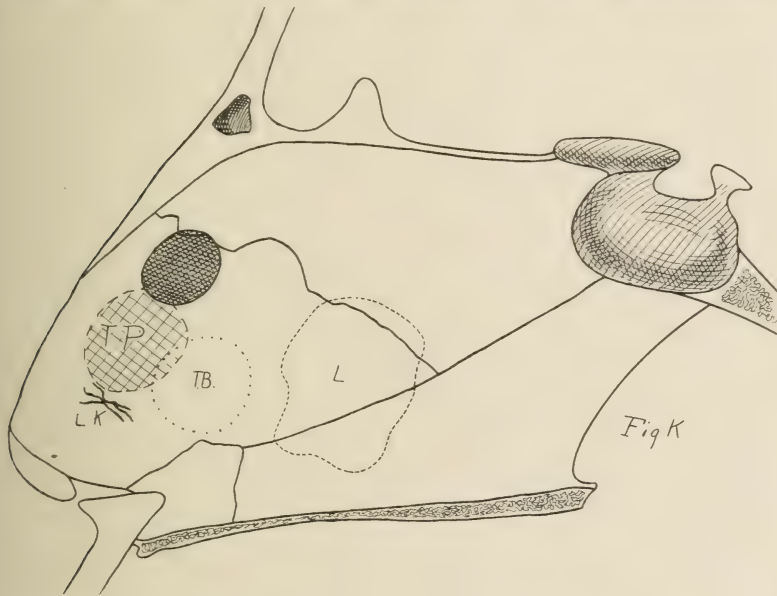


ILLUSTRATION II.—In Fig. K is represented the side view of the septum; LK represents the locus kieselback with some radiating red lines (superficial and ectatic vessels), the upper filled-in circles represent roughly the size and location of the normal tuberculum septi; the irregular shaped dashed line represents the outline of a leutic perforation of the septum; the smaller more circular dotted line enclosing the letters TB represents the location and general shape of a tuberculous perforation; the larger red circle with red cross lines within it and marked P indicate the location and in a measure the traumatic perforations. The traumatic perforations following the operations for deviations and spurs are very irregular shaped and very angular, I have not represented them here.

plate of the ethmoid and the quadrangular cartilage. In the latter instance we find buckling alone without piling up taking place. Occasionally we have dislocation of the quadrangular cartilage with the triangular in front. This is usually traumatic, however, and is found especially frequent among boxers.

II. Hemorrhage from the nose may be due to a number of

conditions and may originate from almost any part of the cavity. In the vast majority of cases, however, spontaneous hemorrhage originates from the rupture of small superficial vessels at a particular spot on the septum known as the Locus Kieselback. The rupture of these vessels is generally due to some trauma, such as picking the nose with the finger, but often a much slighter trauma is sufficient, such as the forcible blowing of the nose. Examination reveals the location to be on the lower part of the cartilaginous septum corresponding with that point just accessible to the finger nail. This part of the septum will show the mucous membrane to be thin and quite atrophic, the vessels dilated and superficial. Frequently, in the older cases, with the history of repeated hemorrhages, metaplasia of the epithelium will be found. Occasionally one may overlook the Locus Kieselback because of the presence of a fair quantity of blood on the anterior end of the inferior turbinate which has been splattered there by the blowing of the nose.

In a severe case of hemorrhage from the septum the immediate treatment calls for the packing of the anterior part of the nasal cavity with sterile gauze, taking care to bring pressure directly upon the so-called Locus Kieselback. Subsequent treatment should be directed towards the prevention of recurrences. This is too big a subject to go into now.

III. Synechias or adhesions of the septum to the turbinates or any part of the lateral wall is not at all a rare condition. I have found it in about 5 per cent. of the cases reporting to me for treatment. It may be:

(a) Congenital (which is doubtful in the mind of the writer); or due to:

(b) Membranous or purulent rhinitis in early childhood.

(c) Cautery, used in previous treatment.

(d) The use of splints introduced into the nose at some time for the correction of septal deformities.

(e) Lues or, in fact, any condition which causes a loss of the mucous membrane at two opposite points followed by reaction swelling, sufficient to cause the two raw surfaces to come in contact.

IV. Hematoma and abscess may be considered together since the latter condition (abscess) is merely the sequence of the former. The condition of hematoma of the septum is that of a subperichondrial or subperiosteal hemorrhage following a fracture of the septum whereby blood vessels are ruptured

through a splinter of bone. The free blood does not escape sufficiently externally, but remains under the periosteum and the bone forming a sac and dissecting up the periosteum and the perichondrium. Because of the break in the continuity of the bone, the blood finds its way through to the other side so that the two sacs, one on each side, are connected together by an isthmus, as shown in the figure. Secondary infection through a small fissure in the mucous membrane follows after a few days when an abscess results. The cartilage melts away rapidly and the final result is a perforation of the septum corresponding in dimension to that of the original hematoma, or nearly so.

A hematoma is recognized by the bilateral swelling in the anterior part of the septum. It must not be confounded with the normal tubercula septi, one on each side, which are higher up, more anteriorly located, more circumscribed and firmer and do not fluctuate as does the hematoma.

Hematoma may be confounded with gumma, but here the history is quite sufficient to determine the diagnosis.

V. Perforations of the septum are:

1. The traumatic (a) those resulting from a fracture, followed by hematoma and abscess, as mentioned above. (b) Perforations found in those who work in cement, phosphorus, arsenic or other very toxic substances. These are due to accumulations of the toxic substances on the septum causing irritation, which is scratched and subsequently followed by a secondary infection with ulceration and loss of substance, including the cartilage itself. These may be termed toxic from the fact that they are primarily due to some toxic substance or they may be called traumatic from the fact that they are secondarily due to injury from picking at the septum with the finger. These perforations are located in the cartilaginous septum and are more or less round or oval.

2. Tuberculous perforations involve only the cartilaginous septum, are regular in shape, round or oval, and without any evidence of reaction or a scar.

3. Luetic perforations involve not only the cartilage, but quite invariably the bone as well (more than 95 per cent.). They are irregular in shape, show evidence of a reaction and white radiating scars.

VI. Gumma affects any part of the septum, but usually begins in the anterior part. There is marked swelling and con-

gestion. They tend to break down early and ulcerate and with the secondary infection which follows, a very offensive, purulent, stringy, (containing shreds of tissue) discharge is produced.

I shall not discuss the subjects of lupus, tumors, rhinoskleroma, etc., of the septum, since they are rather rare conditions and too complicated for discussion before other than a society of specialists.

PELLAGRA AND ITS RECENT MANIFESTATIONS.

BY

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(Read before the New York State Homœopathic Medical Society, February, 1910.)

IN 1762 Gaspar Casal described a set of symptoms under the name of "mal de la rosa," applying to a disease that had been known in Spain since 1735, and it is well to observe that the disease is still present there, although only in the northern part, as it is in every country that has been unfortunate enough to develop it. This original name typified the color of the erythema as "mal del sol," sunstroke of the skin, intimated its solar causation. It appeared in Italy in 1750 and more especially in Venetia in 1776. It was then that Frappoli gave it the name pellagra (from the Latin pellis, the skin; and aegra, diseased). Even at this early date damaged corn was suspected as the causal agency and an act was passed which prohibited its sale in Venice. France next reported its presence in 1829. Its presence in other parts of Italy, the Balkan peninsula, Austria, Hungary, lower Egypt, northern Africa, Mexico, and in isolated instances elsewhere has been an established fact for a varying period of years. It has been called Lombardy erysipelas, Lombardy leprosy, Alpine scurvy, *Lepra Italica* and numerous other local names. At the present time, it is estimated that there are over 100,000 pellagrins in Italy, over 50,000 in Roumania, and a comparatively huge percentage in portions of Egypt.

In 1864 Dr. Gray, of Utica, New York, and Dr. Tyler, of Somerville, Mass., reported individual cases. In 1883 Sher-

well reported a case of a Genoese sailor in New York, but these isolated cases were soon forgotten and attracted little attention. But since the interesting report of Seavey,¹ in 1907, concerning cases in Alabama, and the investigations of Drs. Babcock and Watson,² of Columbia, S. C., which culminated in their trip to Italy in the summer of 1908 to establish the identity of the suspected American and of the Italian types of pellagra, a widespread interest in the disease has arisen, not limited to dermatologists and alienists, but among general practitioners and health officials especially of the affected sections. It is now believed that it has existed in the South for years, some authorities claiming that it was the probable cause of the high death rate in the Confederate prison camps. Although I have been fortunate enough to hear a first-hand description of the sickness in Andersonville from a physician there imprisoned, it would seem to me that scurvy, enteric fever, the exanthemata and anæmia due to the poor food, improper sanitation of camp and of person and previous wounds were enough to account for the large number of deaths. However, an erythema of varying degree, a persistent enteritis and poorly cooked or prepared corn were constant factors, hence there are certainly good grounds for the provisional diagnosis.

Pellagra can now be said to be endemic in South and North Carolina and Georgia, and nearly so in numerous well scattered sections of twenty-two States. It is estimated that there are 5,000 cases³ now present in the United States and they are here to stay and to increase. So far a large proportion, probably over 75 per cent., are located in the States specifically mentioned, but Chicago, Ill., Nashville, Tenn.,³ the Peoria State Hospital, Peoria, Ill.,³ East Mississippi State Hospital³ and other locations have reported authenticated cases, varying from 130 to one or two. A number have been reported from Brooklyn, N. Y., and a case died there as recently as October, 1909.⁴ A number of Northern specialists have been able to observe these almost epidemic conditions in the South, and recently a case⁵ from Georgia was exhibited before the New York Academy of Medicine and afforded an opportunity for a large number of physicians to see a typical case.

The items preceding have been given to impress historical data upon you, while those following, coming from the personal observations of one certain and three suspicious cases in private and hospital practice, a large number in Italy, in August,

1908, as well as the investigation of sixteen cases in Nashville, Tenn., in July, 1909, are offered that you may become duly impressed by the proximity of this dread disease and its possible effects upon the community in which you live. I might add that I was able to see the Nashville cases through the courtesy of Dr. J. M. King and was accompanied by Drs. Tucker and Hibbett, county and city health officers.

Pellagra can present a multiplicity of symptoms, some of which are fairly characteristic, varying with the individual, and the country in which he lives, but the whole picture of the disease course, extending over some months or years, can alone establish a sure diagnosis in the absence of many typical acute cases and the lack of confirmatory diagnostic factors such as the microscope or serum diagnosis. Roughly speaking, we look for gastro-intestinal and cutaneous symptoms to precede the cerebral and cerebro-spinal complications. Despite the fact that sporadic cases are being reported constantly, the endemic character of the disease should never be forgotten. Essentially chronic in its course, it shows periods of remission and aggravation in recurrent attacks. There is often an indefinitely described prodromal period covering several winters preceding the spring during which the disease blossoms forth. The prodromata or in some cases the only apparent onset, includes a peculiar psychic depression, headache, dizziness, lassitude and general weakness, articular and rheumatic pains of trunk, legs, and especially of hands and feet. The tongue is coated along with gaseous eructations, tense abdomen and diarrhoea. Eye symptoms occur in a large percentage of cases. The skin is usually involved but the lesions may be primary or secondary in development. The areas exposed to the sun, as the face, neck, upper chest and back, dorsal surface of hands and feet, lower part of the forearm, or even the elbows if exposed, or as in the case of native Egyptians, the entire body, these portions show a dermatitis starting not unlike a ptomain eruption or toxic erythema, being diffuse, bright, livid red or a dull brownish red, swollen often to a great degree and itching when exposed to the sun. These macules become chocolate colored and gradually disappear or may continue as in the evolution of a typical dermatitis, developing vesicles, bullæ, pustules and crusts. Within from one to three weeks, the sub-acute symptoms disappear and olive brown pigmentation desquamation and superficial scarring ensues. After a number of these at-

tacks, the affected skin loses its elasticity, is shining, tender, bronze brown in color and markedly atrophic. The epidermis is thin and looks like silk. Weakness and emaciation follow with a dry red denuded tongue, marked stomatitis, painful swallowing, an aggravation of cerebral symptoms, delirium, uncontrollable diarrhoea, and death. In some cases that I have seen the dermal symptoms were the principal ones and the most commonly affected area, the dorsal surface of the hand, but enough has been said to emphasize the gastro-intestinal and cutaneous involvement and their serious import, so, lastly, a word concerning the mental symptoms which give rise to the great and necessary interest taken in this disease by the authorities of public insane asylums here and abroad. Melancholia is the common type, showing in mild cases disinclination to thought or action; later, refusal of food and suicidal tendencies. Maniacal symptoms rarely develop but may do so during apparent stupor. The sensori-motor disturbances are of all degrees even to paralysis. An acute form of pellagra typhus has been described showing a febrile course, delirium, trismus and opisthotonos. The disease often recurs annually and by its persistence wears out the strength of the sufferer in from two to ten years. Within the last three years there has been such an alarming increase of cases in our Southern States, almost an acute epidemic type and with a mortality greater than usually noted in Europe, that additional impulse has been given to the study of its cause, so as to prevent its spread and even its continuance.

Damaged maize is the classical etiological factor, but the potency of this theory is only marked because there is no better cause known. The origin of some of our cases can be directly traced to the consumption of maize which has produced a toxine after its storage. It is not thought that corn properly gathered and housed will cause pellagra. Crocker⁶ has written that as far as Europe was concerned that the etiology may be summed up "in the alliteration, Peasant life, Poverty and Polenta plus exposure as an exciting cause." It may occur at any age, but women are more frequently attacked and children least often, the most susceptible period of age being between 30 and 50. Black and white are alike affected in this country and females are in an overwhelming majority, while in Egypt the males, because they work most in the fields, are in the majority. It is interesting to note that 90 per cent. of the cases occur

among the poor peasantry of lower Egypt who eat maize and live under the worst possible hygienic conditions. In upper Egypt, where millet is eaten, pellagra does not occur, although the poverty and bad hygiene is just as prevalent. Few cases are seen in cities here or elsewhere, hence it is assumed that the immediate cause is a profound toxæmia analogous to ergotism produced by the persistent consumption of changed, decomposed or fermented maize. Professor Lombroso, of Turin, was the earliest scientific demonstrator of the theory that certain fungi found in maize when exposed to moisture produces in the corn a toxin and this toxin when taken into the system caused pellagra. These organisms injected into persons or animals or grown in any other culture medium except maize, have been shown to be non-toxic. If grown in a corn gruel culture it separates into three portions, the upper of non-toxic fungus, the middle of a toxic liquid and the lower of a toxic precipitate. Lombroso made a 33 1-3 per cent. alcoholic extract from damaged maize, calling it pillagrozein and with it, he produced in both men and animals, symptoms similar to pellagra. Although the preceding etiologial facts are true of the great mass of pellagrins, we must not forget that sporadic examples have been reported abroad and are now being cited here and in Europe of cases that never lived in poverty or in the country, or worked in the fields or eat corn, as is true of two of my cases, so may it not be possible that other cereals as oats and wheat can be causative factors inasmuch as many ordinary loaves of bread are improperly and not thoroughly cooked, giving organisms an opportunity to grow. Many of our cereal food products are carelessly and cheaply made even to the point of criminal negligence. In our hurry to do away with the trouble of preparation and avoid expense the American public is a willing partner in the development of intestinal disorders and the consequent fertile field for toxæmias. It is here interesting to note the comparison made by Dr. Power, of Clemson College, South Carolina, showing the relationship between epizootic cerebrospinal meningitis, or blind staggers as follows, "as practically every outbreak occurs among animals receiving damaged corn or fodder the majority of investigators believe the causative agent to be moulds or fungi, grown on damaged food, particularly corn." Although there are many differences between pellagra and this animal disease, still there is a marked similarity in the sensori-motor disturbances. Dr. H. Z. Nichols³

recently summarized the investigation of "spoiled corn" and stated that no fungus growth had been found which would survive cooking. He thought that the most promising field of investigation was along the line of an intoxication from the toxic products of improperly handled corn acting in a damaged intestine and that possibly the recent trouble with corn was due to the fact that shelled corn had not been thoroughly weathered. Pellagra is not considered contagious, but many writers have cited cases that were most suspicious and at the same time the looked-for causal features were absent. To this end I quote from a letter written to me recently by the health officer of Davidson county, Tenn., Dr. B. S. Tucker, who says:

"In October, 1905, the matron at the Baptist Orphanage Home received four children from Newport, Tenn., and in the following spring, 1906, one of these children developed pellagra and died in 1907, there were also two other cases; in 1908 there were 11 cases, and in 1909 there were 16 cases at the institution, making a total of 17 cases all told in the institution. In this institution there were a total of about 70 children, and you see that about 24 per cent. of the total number of inmates have had pellagra. These children were using meal from a mill that furnished its products to the Central Tennessee Asylum for the insane which has 625 inmates, and out of this 625 there is not a single suspicious case. Also the County Asylum and Poor House have about 425 inmates; they also use the same corn products that the orphans' home use, and there is not a single case of pellagra there. Another case, Willoughby H., widower, male, white, age 39 years. First symptoms of the disease appeared in April, 1908, in the winter of the same year disappeared, and reappeared in April, 1909, and died at Isolation Hospital, September 6, 1909. Mrs. Mary W., age 28, female, white, lived within 200 feet of Willoughby H., and did the washing and ironing for said Willoughby H.; also did house work for him during the summer of 1908; she developed pellagra in the spring of 1909; she now has a well-developed case of pellagra. I only mention these facts to you as all authorities say that the disease is not communicable and is caused from bad corn in some form. All of these cases have the earmarks of being communicable. I don't say that it is, but to say the least, it looks very suspicious."

Also cases of conjugal pellagra have been reported. Hence, we are somewhat justified in saying that the method of trans-

mission is not understood. Undoubtedly, cases can be hereditary because parents and children may eat and live alike and in the same locality for years.

Hebra, years ago, said that the symptoms of many cases of pellagra resembled other toxæmias caused by spoiled vegetables.

Sambon,⁷ reviewing the research work up to 1905, states that pellagra is probably protozoal, and concurring with him, J. M. King,⁸ in a recent article, says: "It may be that maize, damaged or sound, furnishes the habitat for the organism in Italy and in other parts, while it may be conveyed in some other article of food in other parts of the world, for in some sections where the disease is prevalent, maize is used but little as an article of food." Nicholas and Sambon,⁹ in a review with a complete bibliography up to 1908, assert that improper food, psychical depression, poverty and causes of malnutrition are effective perhaps to a greater extent than chemical changes which have thus far been recognized in the maize consumed. This conclusion nearly agrees with the opinion of Manson, who is the best known objector to the accepted theory of the origin of pellagra as described.

A few words concerning the pathology, prognosis, diagnosis and treatment of this disease may not be amiss, although the animus that prompted this paper deals more with the historical features, present-day aspects and the etiological proofs of pellagra. Post mortems have shown fatty and atrophic changes of the heart, liver and kidneys, intestinal ulceration similar to tuberculosis, enlargement of the mesenteric glands, hyperæmia, anæmia and œdema of brain, cord and meninges, symmetrical sclerosis of the spinal cord and in the acute cases an acute myelitis. Symmetrical sclerosis of the posterior column of the cord was the most constant of the pathological findings. It would seem that the initial changes were in the central nervous system although the point of entry may be the stomach or intestines. As regards the blood, there is usually found a mild secondary anæmia, leukocytosis only rarely and the differential count negative.

Prognosis is grave in all but mild cases and even these may terminate fatally if not properly cared for and diagnosed early.

Differential diagnosis is not difficult if the gastro-intestinal, skin and mental symptoms are present in sufficient clearness with the endemic feature to assist. It may be necessary to consider leprosy, syphilis, actinomycosis, dermatitis herpetiformis.

acrodynia, ergotism, vesicular eczema, pityriasis rubra and rarely almost any profound toxæmia.

No treatment of an epidemic or endemic disease can result successfully that does not attempt to isolate a causative factor and then proceed to remove it. Hence, it is that some of our Southern States and our National Government are now actively engaged in research work along these lines. Large sums have been spent by Italy, Austria, Spain, Portugal and Roumania to stamp out this disease. A more careful supervision of the collection, storage and handling of maize products, an enforced improvement in the hygienic surroundings of those affected; different climatic conditions when possible and even segregation are advised. As regards individual cases, hospital treatment should be insisted on when possible, tonics and a generous diet are essential. Massage, galvanism, the high frequency currents, alcoholic and salt baths together with remedies variously demanded are to be thought of. Arsenic in different forms, from small to large doses, seems best indicated, but who will attempt to specify therapeutically when no two investigators agree and most are pessimistic. Saline solutions, atoxyl, mercury, thyroid extract and the various intestinal ferments have all had their trials but the specific remedy, it may be a serum, is yet undiscovered.

1. *J. A. M. A.*, July 6, 1907, page 37.
2. Report So. Carolina Board of Health, December, 1907.
3. Conference on Pellagra, Columbia, S. C., November 3-4, 1909.
4. *Monthly Bulletin*, N. Y. State Dept. of Health.
5. Drs. J. W. Babcock and J. J. Watson, December 16, 1909.
6. *Diseases of Skin*. Crocker, 3rd edition.
7. Remarks on the Geographical Distribution and Etiology of Pellagra, *British Medical Journal*, November 11, 1905.
8. *Southern Medical Journal*, November, 1908, page 289.
9. *Annales*, 1908, s. i. v., ix., page 480.

LACHESIS LANCEOLATUS.

(BOTHROPS LANCEOLATUS, FER DE LANCE, JARARACA.)

BY

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I.

CLASSIFICATION.

Kingdom—*animal*; sub-kingdom—*artiomorpha*; type—*os-teozoa*; sub-type—*oviparum*; class—*reptilia*; order—*saurii*; sub-order—*ophidia*; family—*viperidae*; sub-family—*crotalinae*; genus—*lachesis*; species—*lachesis lanceolatus*, LACEPEDE (1789).

II.

SYNONYMS.

Coluber lanceolatus, *tigrinus* or *braziliensis*, *Lacépède*; *vipera lanceolata* or *braziliensis*, *Latreille*; *coluber megaera*, *Shaw*; *trigonocephalus lanceolatus*, *Oppel*; *cophias lanceolatus*, *Merrem*; *cophias atrox*, *cophias holosericeus*, *cophias jararaca*, *Neuwied*; *bothrops furia*, *bothrops leucostigma*, *Wagler*; *craspedocephalus lanceolatus*, *craspedocephalus jararaca*, *craspedocephalus weigeli*, *Fitzinger*; *trigonocephalus jararaca*, *Schlegel*; *bothrops megarera* or *subscutatus* or *sabinii* or *cinereus*, *Gray*; *bothrops lanceolatus*, *bothrops jararaca*, *Dumeril and Bibron*; *craspedocephalus brasiliensis*, *Wucherer*; *bothrops atrox*, var. *dirus*, *Yan*; *bothrops brasiliensis*, *Cope*; *trigonocephalus atrox*, *Garm.*; *bothrops atrox septentrionalis*, *Müller*; *bothrops glaucus*, *Vaillant*; *lachesis lanceolatus*, *Boulenger* (Catalogue of the Snakes in the British Museum, Vol. III, 1896).

The *lachesis lanceolatus* has been designated, in our materia medica, by Ozanam, Farrington, Allen, Clarke, etc., as a *bothrops lanceolatus*; but this name is improper, because the word *bothrops* has disappeared from the modern classification of snakes adopted by the British Museum, and has been substituted by the word *lachesis*, which is, in natural history, the oldest used to designate this genus. It is also commonly named *lance-headed viper* or *lance-headed snake* and some natur-

alists know it under the improper name of *lachesis trigonocephalus* or *trigonocephalus lachesis*; in Brazil, we name it *jararaca*, and, in some islands of the Antilles, it is known by the vulgar name of *fer de lance* or *vipère jaune*.

III.

HABITAT.

The *lachesis lanceolatus* is found in Mexico and Central America and in the whole of South America; it is the most common snake in all the States of Brazil, and the one which causes also the greater number of snake-poisoning. This viper inhabits also some islands of the Antilles, as Martinique, Guadeloupe, Saint-Lucie and Beguia, where it is the only venomous species, but very numerous.

IV.

DESCRIPTION.

The *lachesis lanceolatus* can attain a length of four feet or four feet and a half; but ordinarily it is three feet or three feet and a half long.

However, in the islands of Martinique and Saint-Lucie, this species can attain greater dimensions, till nearly five feet and a half or rarely six feet long.

The female is distinguished from the male by the size of its head, which is greater, and the male has the body finer and the tail somewhat bigger and longer than those of the female.

This is ovoviviparous and very prolific; it is able to produce each time as many as twenty little snakes.

The exemplars of great dimensions are commonly named, in Brazil, by the people of the country, a *jararacussu*; but this name is improper and a cause of confusion, because the *lachesis jararacussu* is a distinct species.

The head of the *fer de lance* or *lance-headed viper* is flat and of an almost triangular shape (lance-shaped) and very distinct from the neck; the upper-head scales are small, imbricate, more or less strongly keeled, arranged in seven or eight longitudinal and parallel series between the supraoculars which are large. Snout rounded or obtusely pointed, with sharp, slightly raised canthus. The rostral plate is square, as deep as broad;

the nasal plate is divided; two inter-nasal plates; two or three post-ocular plates; and one, two or three sub-oculars separated from the labials by one or two series of scales; seven or eight upper labials, the second forming the anterior border of the loreal pit; the dorsal scales arranged in 23-33 rows sharply keeled; the belly is covered by 180-240 scales; anal entire; subcaudals 46-70, which are arranged all, or the greater part, in two parallel rows. The tail is ended by a nail-shaped scale.

The coloration of *lachesis lanceolatus* is very variable; but usually the ground color is dark-green, ash-colored, or, some times, yellowish, always lighter on the ventral than on the dorsal aspect. They may be also grey, brown, olive or reddish above. This color is rarely uniform; usually, along the back, on each side, there are black angle-shaped figures, separated from each other, whose vertices are turned to the dorsal middle line, upon which they meet or alternate. The ground color around these black angles is lighter than the general dorsal aspect, which becomes more distinct than those black angular figures on lighter ground; a dark streak extends from the eye to behind the angle of the mouth. Lower parts yellowish, uniform or spotted with brown, or brown with light spots, or greenish-dark spotted with yellow.

The *lance-headed viper* inhabits the small woods and bushes, around the old trunks of trees, fallen and covered with parasites, principally in the plantations, and even in the neighborhood of the habitations, where it hides and attacks frequently the careless planters, laborers or hunters. It prefers the fresh and shady places and, during the great heats of summer, it is found in the border of the little rivers; it is pleased also with the *sapé* huts, the abandoned little paltry-houses, and is found creeping over the mud of the pools which grows in the mangrove; finally, the brambles, the gorses, all the places badly reputed are its dominion.

The *lachesis lanceolatus* is a nocturnal snake; some times, at noonday, it is found asleep, winded on the border of roads, what leads the people of the country to name it a *lazy jararaca*. In the night it goes into the gardens and poultry-yards and even into inhabited houses, where it hides in the mouse hollows.

However, the *fer de lance* is a little aggressive species: it habitually creeps away when any person comes near; and only bites, when the traveler, by inadvertence, approaches and treads

on it without seeing it, or when he touches it, by introducing his hand into the bush, or into the cavern where it hides.

This snake feeds almost exclusively on *prey*, little birds, chickens, toads, lizards, frogs and mice; and when going in pursuit of them, it invades often the store-houses and the dwellings.

V.

PART EMPLOYED—VENOM.

The quantity of venom stored up at one time by a lance-headed viper is, when liquid, usually nearly 0.2 c.c.; when the venom is dry this quantity is reduced to a fourth part, that is, it produces 0.066 milligrams of dry venom.

"A *lachesis lanceolatus* (*lance-headed viper*) of Martinique—says Dr. Calmette—of a middle size, has furnished to me, by squeezing of its two glands, 0.320 milligrams of liquid venom and 0.127 milligrams of dry venom."

Jararaca venom, when fresh and liquid, is a gum-water-looking body, viscid, inodorous, transparent, of a more or less deep yellow color; this animal fluid dries into a solid substance, which has the appearance of amber.

Liquid, this venom is soluble in distilled water, in a mixture of water and glycerine or in pure glycerine; but, when dry, it is not soluble in pure glycerine. It is insoluble in alcohol and ether. It coagulates at 100° Centigrade and loses its general venomous activity at 70°; but its local action is conserved again, after overheating at 100°.

VI.

PREPARATION FOR HOMOEOPATHIC USE.

For homœopathic use, the venom of *lachesis lanceolatus* may be used in liquid, as soon as it is collected from the fangs of the snake, or dry, after evaporation.

It may be used then in two forms: the liquid form, by dilution of the poison in pure glycerine, and the solid one, by triturating the poison with sugar of milk.

In the liquid form, the venom of *lachesis lanceolatus* must be always employed fresh, because, when dry, it is insoluble in pure glycerine; we dissolve one part by volume of the venom in nine parts by volume of pure glycerine and we have so the

mother-tincture of the *British Homœopathic Pharmacopœia*; for making the three first centennial attenuations we should prefer again, as a menstruum, the pure glycerine; for the fourth and fifth, a mixture of one part of glycerine and three parts of *proof spirit* (see *Br. Hom. Pharm.*); and for the sixth centennial and upwards *spirit twenty over proof*.

In the solid form (the trituration) the venom may be employed liquid or dry: if the venom is liquid, the first potency is made by triturating a minim of the poison with 9 or 99 grains of sugar of milk (according to the decimal or centesimal scale); if the venom is dry, the first attenuation is prepared by triturating one part by weight of the poison with 9 or 99 parts by weight (according to the scale) of sugar of milk.

All following dry dynamisations are made according to our pharmacopœias.

From the third centesimal attenuation, conversion of the trituration into liquid potencies may be made; but here again should be used, as a menstruum, that employed for the fourth and fifth liquid one, and only from the sixth upwards should be used the spirit 20 O. P. of the *British Hom. Pharmacopœia*.

VII.

DOSE.

Lachesis lanceolatus should be used from the third decimal potency upwards; in tablets, if trituration, or in drops in distilled water as a vehicle, if tincture. From the sixth centesimal upwards the globules or disks may be used.

The third or thirtieth should be mostly employed in the acute cases.

VIII.

TOXICOLOGY.

Sources of the materia medica of lachesis lanceolatus.—No pure proving on health, in the homœopathic school. As far as we are informed, none has been made with the venom of this snake; so that the entire pathogenesis of *lachesis lanceolatus* proceeds from observations of bites in men and animals, as well as from experiments on animals with its venom. These experiments were made, especially by Lacerda, Vital Brazil and Calmette.

The first source of information about *lachesis lanceolatus* is the monograph on the *trigonocéphale des Antilles*, published by Moreau de Yonnès in 1816; to this we can add another monograph on the snake of Martinique—*la morsure de la vipère fer-de-lance*, Thèse de Paris, 1823—published by Blot. Besides these two monographs, it must be pointed out that of Constantine Hering on *Wirkungen des Schlangengiftes*, published in 1837, which contains, as proceeding from bites of a *Brazilian snake*, some symptoms from bites of *jararaca*, taken from the book on the natural history of Brazil by Prince Max. Neuwied. Among these symptoms, which sketch very clearly the local and general effects of this snake-venom, we find the *hemorrhage from nose and every orifice of the body*, which is the principal keynote of its pathogenesis.

The second source of information as to the pathogenesis of *lachesis lanceolatus* are the three following monographs: Of Dr. Guyon (*Thèse inaugurale de Paris*, 1835), of Dr. E. Rufz (*Enquête sur le Serpent de la Martinique*, Paris, 2d ed., 1859), and of Dr. Encognère (*Des accidents causés par la piquûre du serpent de la Martinique*, Thèse de Montpellier, 1865). In all these books we find numerous symptoms from bites of the snake of Martinique.

The third source is the modern studies made by Dr. Lacerda, Rio de Janeiro, on the effects of *jararaca venom*, which are exposed in his book (*Leçons sur le Venin des Serpents du Brésil*) published in Brazil in 1884; and the clinical observations of bites of this snake in men, published by Dr. Vital Brazil, O. A. Borges and Dorival de Camargo, also in Brazil in 1901, which complete the informations we have on the symptoms from venom of *lachesis lanceolatus* on the healthy man.

These informations are finally improved by the experiments on animals, made by Dr. Vital Brazil (whose results were published in *Revista Medica de S. Paulo*, 1901,) and by Dr. Calmette (who resumed these labors and reports the results in his book on *Les Venins* published in 1907).

* * *

Poisoning.—In the human body, the first symptoms of poisoning from bites of *lachesis lanceolatus* appear without determined time, almost always after the first or second hour, but some times earlier, soon after the bite, and according to the severity of the case.

The severity and rapidity of the poisoning are directly pro-

portional to the quantity of venom discharged from the fangs of the snake, during the bite.

Save a slight and persisting sensation of burning, heat and numbness in the bitten place, there are not, in the first instants, any symptoms that announce the aggression suffered.

After some time, the first swelling appears in the bitten part and is accompanied by general disorders of the nervous system.

Around the wound, an enormous swelling appears, which is at first pale, then livid, bluish, cold, with hemorrhagic infiltration. Little by little it multiplies and more or less large violaceous spots of subcutaneous hemorrhage extend on this swelling. There are also intense pains, which some times become general; invading the whole frame; and the swelling extends to the whole bitten limb, which may become wholly blackened, and even gangrened in the prolonged cases. In these cases, the swollen parts inflame, with inflammatory fever, and this inflammation is followed by gangrene, mortification, sphacelation and extense suppuration of tissues.

The swelling, in certain cases, may also extend to the whole body, mottled then with large, greenish or bluish spots. But the mild cases are not so. The poisoning is limited to some local effects only. According to Dr. Guyon, the bitten part swells, cools and becomes livid, with loss of sensibility, but, and though considerable, disappears rapidly without other consequences and symptoms.

The general symptoms supervene, as we have said, after the first swelling, in the middling cases. There is at first—weariness, uneasiness, restlessness and distress; afterwards inexpressible lassitude, sluggishness, muscular relaxation, extreme dryness of the mouth, intense thirst, tongue enlarged and heavy, contractions of jaws and lips, some times trismus, frontal headache; next there are tumefaction of the stomach, nausea and spasmodic vomiting, at first alimentary, then bilious and later bloody. The giddiness, fainting and debility are extreme, producing staggering, falling and inability to stand or sit up; there are dimness of vision, sunken eyes, pupils dilated and almost or completely insensible to light; confusion of mind; the face becomes swollen and puffy, the salivation is copious, the eyes red-injected, watery, tearful; the upper lids heavy and half closed, the expression besotted; there are prostration, drowsiness, indifference to all, later coma, the sick

hardly answering to the questions. The sweats are ordinarily copious and cold; there is swelling of the lymphatic glands, either only those of the neighboring region or of the three principal superficial regions—inguinal, axillar and cervical—even when the bite has been in a foot.

At first, the pulse is rapid, afterwards it becomes retarded, slow and extremely feeble; the temperature, at first feverish, falls down to the normal, but, in certain cases, there may also be fever and delirium, specially in the reactionary period or in the chronic poisonings. "There are patients," says Dr. Rufz, "who complain of an external heat some times very intense and of an ardent thirst; there are others who complain of an external cold with a devouring internal heat."

The respiration, at first accelerated and profound, becomes later slow and superficial; there are: oppression of chest, dyspnoea and even orthopnoea, symptoms of pulmonary congestion, and rarely a severe pneumonia. This pulmonary congestion or pneumonia from *jararaca* bites are frequent, and as Dr. Guyon says, principally in the cases somewhat prolonged, which last four to six days: there is more or less abundant bloody saliva.

These symptoms are then accompanied by intense and profuse hemorrhages issued from every orifice of the body (blood flows from nose, ears, lungs, mouth, gums, tongue, stomach, bowels, kidneys, and even, sometimes, from the skin). There is also extravasation of blood in the conjunctivae. But the most frequent and constant hemorrhages, which are observed in all the cases of poisonings, are those from the stomach and bowels, (gastrorrhage and intestinal hemorrhage are characteristic of *lachesis lanceolatus*). Haematuria is also very frequent. The small bites bleed much. In women, says Dr. Lacerda—we have observed metrorrhagias from *jararaca* bites and also from the eye and the interstices of the nails.

The deglutition becomes difficult; there is constriction in the throat, so that the sick cannot swallow even the water. The abdomen is tympanitic and painful to pressure; there are cases in which supervenes intolerable intense colic, with great sensibility to touch in the whole abdomen, extending to the epigastrium and causing painful cries from the patient.

The sensibility becomes obscure, particularly in the bitten place, or there is great sensibility to touch; the skin is either of a bluish color, like that of Asiatic cholera in its algide stage (Guyon), or of a yellowish subicteric color, like that of yellow

fever, with violaceous spots issuing spontaneously here and there, without swelling.

The convulsions (principally in children) and also the tetanus of the whole frame and the complete blindness, are unfrequent. However, the blindness, in some cases in which the cure takes place, may be complete and persisting and the patient does not recover his sight; but as a general rule it is dissipated rapidly.

The paralyzes from *jararaca* bites are very rare; and when they occur, they are due to hemorrhages, embolies or thromboses of cerebral vessels, and as a consequence hemiplegies more or less complete, with or without aphasia (Guyon, Blot, Rufz).

In some acute poisonings, there may be sudden attacks of loquacity and of frenzy and gaiety (Rufz).

If recovery takes place, all these alarming symptoms, even the most grave, pass off rapidly: the swellings and the pains disappear, the hemorrhages cease; the urine becomes more clear and returns to its natural character: the stools, which were bloody or black, like coffee-grounds, present less and less bloody clots and become more and more natural, and, though remaining extremely weak, exhausted and bloodless, the patient recovers rapidly, within a few days. Some times, however, during this reactionary period, a high fever supervenes, with intense headache, white coated tongue, backache, general erythema or slight urticaria, which disappear rapidly. In other cases, the recovery is not so rapid, and in the bitten place develops a gangrenous spot, and hemorrhages from the mucous membranes and serous cavities, as the pleura and the pericardium, are not late in appearing (Dr. Calmette); then there are also hemorrhages from the kidneys and albuminuria. These troubles, more or less intense, remain for some days; afterwards they disappear slowly after a true convalescence, but they may leave behind durable marks, such as periodical ulcers or megrim with hypochondriasis, etc., which may last months and years, and affect profoundly the life of the patient.

But if this issue does not take place, the poisoning advances and the patient sinks rapidly under the depressing influence of the venom: The respiration becomes difficult, slow, labored, stertorous, the extremities become cold, the body is covered with cold and clammy perspiration, the loss of consciousness is complete, then coma succeeds, and the patient, as if narcotized,

expires in profound coma (Calmette); or repeated fainting spells supervene and the patient succumbs from cardiac paralysis (Rufz and Vital Brazil). "Some physicians," says Dr. Rufz, "who have seen these cases in these last moments have assured me that, if they had not known the commemorative circumstances, they would have thought the patients were suffering from a pernicious algid fever."

The duration and intensity of these symptoms vary according to the cases: there may be very mild cases, some times, as we have said, with some local effects only, in which recovery takes place within a few hours; but there may be other cases, in which death takes place, suddenly, and, before there has been time to observe the symptoms or these to become developed: There are still other cases in which the poison penetrates into a vein. Death can then supervene abruptly within a few minutes, before there has been time for local symptoms to be evidenced. The venom, penetrating directly into vessels, produces an almost immediate coagulation of blood, which determines an instantaneous death by the formation of a generalized embolus.

But often, as say Dr. Rufz and Dr. Lacerda, the action of the venom is entirely local, that is to say, limited to the bitten part. The irritation is then enough intense to produce an abscess more or less considerable. Some times also, the suppuration, instead of remaining localized, extends to the whole limb, giving rise to a diffuse erysipelatous phlegmon, and the arm or leg becomes triple its ordinary size: There may be felt then a soft and flabby swelling, appearing as if distended with gas, and over which phlyctenæ multiply under skin.

"Only after examining the swollen and violet spotted limbs," says Dr. Blot, "we may have an idea of them; it seems as if an enormous bloody infiltration like that which results from a violent bruise has taken place. The suppuration supervenes before two or three days, the skin loosens and, if it is not conveniently incised, it becomes gangrenous. Then, shreds of cellular tissue are detached with a reddish sanies, the tendons and bones are laid bare, the joints are exposed, the sphacelus invades the parts, especially the fingers, and the whole limb is dissected alive. Colliquation follows and, if the patient does not succumb to the consequences of purulent absorption or of gangrene, the limb must be cut off."

The capillary hemorrhages from the wound are then frequent; colliquative diarrhœa, fever, weakness, emaciation, fre-

quent and feeble pulse, thirst, restlessness and death. When death results in these cases, it does ordinarily occur, says Dr. Rufz, within fifteen days or a month after the bite. In the cases which recover, not unfrequently remain, fistulæ, caries of bones, and ulcers, whose cure is interminable, or horrible scars and deformations, or elephantiasic edematous swellings are left behind. The venom of the *lance-headed viper* is, as we have seen, a very phlegogenic and hemorrhagic one.

"In experimental poisonings of animals," says Dr. Vital Brazil, "subcutaneous or intramuscular injections produce very intense local effects; an enormous swelling which extends more and more to the neighboring regions. This swelling is a hemorrhagic œdema, which extends up through the tissues, and ends, when the poisoning is prolonged, in sphacelation. Soon after the injection, from some minutes to some hours, the temperature mounts a little and falls afterwards more and more till algidity supervenes; there are lassitude, sleeplessness, muscular twitchings, salivation, vomitings and sometimes bloody stools; the pulse at first is rapid, afterwards slow and feeble, difficult breathing, more and more slow and superficial till the end. The pupils are dilated. In the prolonged poisonings, we observe frequently fatty degeneration of the liver and albuminuria (nephritic). The internal hemorrhages, especially from the stomach and bowels, are very intense and almost constant. In poisoning by *lachesis lanceolatus*, paralysis is never observed.

"As to the lesions observed in these cases, the venom of *lance-headed viper* produces an enormous congestion in all the organs, principally in the liver and kidneys, followed by large hemorrhages, which leak into the natural cavities of the body: These hemorrhages are greater in the stomach, bowels and bladder. The surfaces of the internal organs are frequently marked with small hemorrhagic points. When examined, the blood is found dark and fluid.

"A fact, which has called our attention, as soon as we began to study snake venoms, has been the likeness between some lesions produced by a fatal dose (in dogs) of the toxine of yellow fever (culture of icteroid bacillus of Sanarelli) and those of snake poison, principally of *lachesis lanceolatus*.

The hemorrhagic contents of stomach and bowels, the congestion of gastric and intestinal mucous membrane, the color and appearance of the liver and kidneys; the great quantity of

albumin which is found in the urine, etc., are, in broad outlines, the most salient points of resemblance between the two species of poisoning. Even the hemorrhagic œdema, so constant in *jararaca* poisoning, is observed also in yellow fever intoxication, when the toxine is injected subcutaneously.

"We have even observed that animals (dogs), in which we have injected previously the yellow fever toxine, presented greater resistance to the snake venom."

It is the same comparisons that have been made by Dr. Lacerda:

"Certain symptoms," he says, "which are produced by disorders of the sympathetic, as vomiting, so constant in yellow fever, are observed likewise in snake-poisoning. Frontal headache, disturbance of vision, dilatation of pupils, regurgitations of bile, a profound depression of forces, the fear of death, are symptoms which are observed as much in yellow fever as in snake-poisoning. The same thing is said of nose bleeding, hematuria, stomatorrhage, intestinal hemorrhage, jaundice, and albuminuria, which constitute the horrid picture of the last stage of yellow fever and of snake-poisoning.

"If the two morbid conditions resemble each other by the symptoms, they do not resemble less by the lesions revealed by the autopsy. The congestions and bloody infiltrations of the lungs, the modifications of color of the liver, the congestion of the gastro-intestinal mucous membrane, the excessive fluidity of the blood, which loses entirely its power of coagulating and becomes black, the bloody extravasations under the endocardium of the left ventricle, are found likewise in yellow fever and in snake-poisoning.

"We have, then, here two very different causes as to its origin and particular nature, producing different morbid processes, analogous or of like effects."

So does Dr. Lacerda report the effects of the poisoning by the venom of *lachesis lanceolatus*.

Though Dr. Rufz had found little, as to the lesions produced in the human body by *jararaca* venom, in the autopsies which he made in Martinique, the experimental observations made recently by Larceda, Vital Brazil and Calmette, on animals, are very conclusive as to this point.

The whole cellular tissue, neighboring the wound and even very distant from it, is infiltrated with a bloody serum, as far as the intermuscular interstices and the surface of bones; the

muscles are congested and infiltrated with blood; there is intense congestion of the lungs, bloody extravasations, true intraparenchymatous hemorrhages, a true strangling of lungs, with congestion of the bronchia and trachea, where we also found extravasated blood; on the internal surface of the heart, we notice also diffuse subendocardial congestions and hemorrhages and lesions of fatty degeneration; very intense congestion of abdominal organs, extending to the peritoneum and epiploön, from mouth to rectum, whose membranes are dark-red-colored and covered with hemorrhagic spots, either confluent or scattered; blood extravasated in stomach, bowels and bladder; liver congested with bloody spots, or straw-yellow, as in yellow fever, and lesions of fatty degeneration; kidneys very infiltrated with blood, with epithelial scaling, hemorrhagic spots, fatty degeneration and necrosis; only the nervous centres are not so congested as the other organs: there is some times a hemorrhagic pointing in the white substance, and, in other cases, small hemorrhagic spots on the meninges. The whole mass of the blood is found always coagulated in all the vessels: it then dissolves little by little, in six or eight hours, and appears then fluid, incoagulable.

"All these lesions of internal organs," says Dr. Calmette, "resemble wonderfully those observed in patients who succumb to yellow fever."

We may extend these observations to man, and according to Dr. Guyon, the symptoms in animals do not differ from those produced in man. "I remember a cow," he says, "in which, in consequence of some bites, we observed, as in man, pulmonary congestions and hemorrhages, and it had difficult breathing, expelling from its snout a bloody froth and some times pure blood."

IX.

PATHOGENESIS.

General Symptoms.—Weariness, restlessness, distress, inexpressible lassitude, sluggishness, staggering, falling and inability to stand or sit up. Nervous trembling, twitching, quivering. General weakness. Extreme debility. Anaemia; emaciation. Prostration. General numbness. Syncope. Muscular relaxation. Convulsions (in children); opisthotonos. Hemiplegia with aphasia, though the tongue is not paralyzed. Internal

heat, some times very intense. Pains generalized. Enlargement of the lymphatic glands. Congestion of the internal organs. Hemorrhages, constant and intense, from every orifice of the body. Great sensibility to touch. Black spots on the whole body. Worse on the right side. Slight jaundice.

Mind.—Obstinate hypochondriasis. Confusion of mind. Delirium, more or less violent. He hardly answers to questions, indifferent to all. Attacks of sudden loquacity and of frenzy and gaiety.

Sleep.—Tendency to sleep; drowsiness; coma, more and more profound until death.

Fever.—General heat; at first feverish temperature, high fever or fever at 38° Centigr.; afterwards, the temperature falls; chilliness, slight shivering, followed by very profuse cold sweat; general coldness, cold and clammy sweat, very copious. Feeling of external heat, some times very intense, with an ardent thirst; feeling of external coldness with a devouring internal heat and intense thirst. Fever with pulmonary congestion or pneumonia, oppression of chest and bloody saliva more or less abundant. Intense fever (four days after the bite), with heat, thirst and great swelling of the limb. Fever, with thirst, diarrhoea, emaciation; hectic fever, with suppuration.

Head.—Headache in the forehead and in the eyes; megrim with hypochondriasis. Giddiness, vertigo, fainting.

Ear.—Great sensibility to the least noise: he is readily annoyed and cries and weeps at the least noise. Hemorrhages.

Face.—Swollen and puffy, red-injected face, as if drunk; besotted expression. Violaceous face; deathly pale; hippocratic countenance.

Eye.—Amblyopia (dimness of vision), amaurosis (blindness), hemeralopia; pupils dilated and insensible to light. Blindness, temporary or persisting. Eyes injected, watery, tearful, and weak. Lachrymation. Hemorrhage; extravasations of blood in the conjunctiva. The upper lids heavy, half closed and sleepy. Photophobia. Purulent ophthalmia.

Nose.—Nose bleeding.

Mouth.—Contractions of jaws and lips; trismus. Aphasia; cannot speak, although the tongue is mobile. Hemorrhages from gums and tongue. Tongue enlarged and heavy; tongue paralyzed. White coated tongue. Burning thirst. Extreme dryness of mouth; intense thirst, with a feeling of external heat or devouring internal fire.

Throat and Neck.—Constriction in throat, with redness and dryness; difficult swallowing, so that he cannot pass liquids. Extreme dryness in throat. Enlargement of the lymphatic glands of the neck. Hydrophobia.

Chest.—Pains in the chest. Violent pains in the heart. Oppression of the chest, with difficult breathing; great dyspnœa and even orthopnœa. Suffocation. Syncope. Lypothymy. At first accelerated and profound breathing, afterwards slow and superficial, then arrested completely. Anguish in heart. Pulmonary congestion, with acute fever, difficult breathing and bloody expectoration, more or less abundant. Hemoptysis. Pneumonia.

Stomach.—Enlargement of the stomach. Nausea. Spasmodic vomiting, at first alimentary, afterwards bilious and later bloody. Intense hematemesis. Extreme epigastric distress. Black vomiting. Vomiting very frequent. Vomiting followed by a nervous trembling. Vomiting followed by cold sweats and syncope. Anorexia. Pains in the epigastric region extended from abdomen.

Abdomen and Back.—Bilious diarrhœa; colliquative diarrhœa. Bloody stools; stools black like coffee-grounds. Hemorrhage from bowels. Tenesmus. Colic; severe pains in the abdomen, which extend to the epigastrium and become intolerable. Tympanitis. Abdomen painful to pressure; great sensibility on the whole abdomen. Fatty degeneration of the liver. Severe backache.

Urinary and Sexual Organs.—Hemorrhages from the kidneys—hematuria. Nephritis. Albuminous urine. Metrorrhagia.

Skin.—Copious cold sweat at the beginning and end of the sickness. Skin of the bitten part of a bluish color, like an enormous bruise; skin of the body a bluish color like that of Asiatic cholera in the algid stage, or of a yellowish color, as in yellow fever. Slight jaundice. Violaceous spots issuing spontaneously here and there. Ecchymosis. Hemorrhages from the skin; hemorrhages from the interstices of the nails. Skin of the leg and abdomen completely blackened, though the bite is at the foot. General erythaemia. Slight urticaria. Bloody phlyctenæ. Bloody subcutaneous or intra-muscular infiltration. Abscess. Diffuse phlegmons. Easy suppuration. Gangrene of the skin. Slow cicatrization of wounds. Chronic or periodical ulcers. The small wounds or ulcers bleed abundantly.

Extremities.—Speedy and painful swelling of the bitten limb. The swelling, at first pale and confined to the parts around the bite, becomes livid and involves the whole limb, both below and above the wound. The swelling of the bitten part gradually extends to a great distance from its original seat; the limb becomes triple its ordinary size, and is soft and flabby, appearing as if it distended with gas. Enormous bloody infiltration, like that which results from a violent bruise (at the bitten limb). Intolerable pains in the swelling, extending to the whole frame. Cellular and muscular tissue engorged with black blood. Very extensive suppuration. Suppuration and sero-sanguinolent infiltration of all the tissues. Large phlegmon, with destruction of the skin, gangrene, necrosis, fistulæ; portions of cellular tissue are detached, the tendons and bones are laid bare; the joints are exposed; sphacelus invades the parts, especially the fingers; the whole limb is dissected alive; colliquation succeeds, and the patient can succumb to the consequences of purulent absorption. Cramps in the bitten limb. Caries of the bones. Numbness of the bitten arm; soft swelling, as emphysematous, from the fingers, hand, forearm, to the shoulder and adjacent portion of the chest, with blue spots, very painful. Intense pains in the whole arm. Enormous swelling of the leg; bluish color of the skin; hemorrhagic infiltration; hemorrhagic phlyctenæ, gangrene of the skin of the leg; gangrene of the muscles of the leg; large suppurations, intolerable pains in the great toe of the right foot, the bite being in the thumb of the left hand. Gangrenous ulcer in the great toe of the right foot. Convulsions and tetanus. Generalized tetanus. Hemiplegia of the right side, with or without aphasia. Enormous phlegmon of the arm, with plucking out of the muscles, opening of the joint of the elbow, caries of the bones, ankylosis and claw-shaped deformation of the hand. Pains in the joints. Hemorrhages from the interstices of the nails.

X.

CHARACTERISTICS.

Debilitated, hemorrhagic, broken-down constitutions. *During infectious diseases.* Diseases caused by a previous low septic state of the system.

Exhausted vital force; *prostration of vital force*; *blood-poisoning*.

Infectious Diseases; first stage: muscular relaxation and weakness; headache; pains in the whole body; high fever; delirium or invincible tendency to sleep, drowsiness; face red and puffy, *with an appearance of drunkenness*; eyes injected, watery, tearful, weak; the upper lids heavy and half closed; expression besotted; indifference to all; nausea, vomiting. *Yellow fever*, bilious remittent fever, grippe, epidemic cerebro-spinal meningitis, plague, measles, etc.

Hemorrhagic diathesis: blood flows from eyes, ears, nose, skin, nails and every orifice of the body. *Malignant diseases with great tendency to hemorrhage* of a dark and fluid blood. Cancer.

Whenever a purpuric condition supervenes upon other diseases, constituting their hemorrhagic forms. Those forms of blood-poisoning of the very lowest, the most putrid type that come on with great rapidity, in an unusually short time, bleeding copiously from all the orifices of the body, from the ears, from the eyes, from the nose, from the tongue, from the gums, from the lungs, from the mucous membranes everywhere, from the bladder, from the kidneys, from the uterus, from the skin, from the nails, and principally, the most frequent and precocious, *from the stomach and from the bowels*, with rapid increasing unconsciousness and prostration. *Yellow fever*, malignant scarlet fever, typhoid fever, malignant jaundice, *plague*, hemorrhagic purpura, malignant measles, typhus fever, glanders, *hemorrhagic variola*, gangrenous dysentery, dengue, etc.

Gastric hemorrhage: black bloody vomiting like coffee-grounds—gastric ulcer; cancer of the stomach. *Intestinal hemorrhage*—typhoid fever, dysentery. During infectious and malignant diseases. *Hematuria*.

General coldness, cold extremities, cold and clammy sweats, bluish paleness, syncope, prostration—pernicious algid fever; Asiatic cholera.

Cerebral hemorrhage; *apoplexy*, with hemiplegia and *aphasia*. *Spinal apoplexy* in severe hemorrhagic infectious diseases, with paralysis. Epidemic cerebro-spinal meningitis; scurvy.

Diseases of the uterus, with great tendency to *metrorrhagia* of a dark, fluid and offensive blood. Malignant tumors of the

uterus; polypus; hemorrhagic metritis. Metrorrhagia from *menopause*. *Miscarriage*.

Very intense malignant local inflammations, with enormous bloody infiltration, and very severe symptoms of blood-poisoning and profound prostration of vital forces. *Septicæmia*. Large phlegmon, with great sphacelus of tissues. Humid gangrene; gangrenous wounds and ulcers. Anthrax. Malignant erysipelas.

Worse on the right side.

XI.

THERAPEUTICS.

(For the indications, see *materia medica* and *characteristics*.)

Acute atrophy of the liver (malignant jaundice).

Anthrax.

Asiatic cholera.

Appendicitis.

Bilious remittent fever.

Cancer.

Epidemic cerebro-spinal meningitis.

Gangrenous wounds and ulcers.

Gangrenous angina.

Gangrenous dysentery.

Gangrene.

Glanders.

Grippe.

Hemiplegia with aphasia.

Hemorrhages.

Hemorrhagic purpura.

Hemorrhagic variola.

Malignant erysipelas.

Malignant scarlet fever.

Malignant measles.

Malignant tumors of the uterus.

Megrim.

Metrorrhagia; from menopause.

Miscarriage.

Peritonitis.

Pernicious algid fever.

Phlegmon.

Plague.
Pneumonia.
Pulmonary congestion.
Scurvy.
Typhoid fever.
Typhus fever.
Yellow fever.

ESSAY ON USEFUL KNOWLEDGE.

ALTERATIONS OF THE SEROUS SYSTEM.

BY

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THE *serous system* comprises chiefly four cavities, the *peritoneal*, the *pleural*, the *pericardial*, and the *cranial*, and in them *serous effusions* are frequent results of *inflammatory processes* and generating *passive congestions*. In the *peritoneal*, the serous membrane lines the abdominal walls (*parietal peritoneum*), as well as the contained viscera (*visceral peritoneum*). In the *pleural*, the serous tunics invest the lungs and line the thorax. In *pericardial*, the membranous bag encloses the heart; and in the *cranial*, the effusion takes place, either in the cavity of the encephalon, or in the subarachnoid space.

In the *active form of hyperæmia* the peritoneal serous membrane is seen red with marked microscopical vascular ramifications. The cause seems to be the rapid diminution of the pressure of the effused fluid in the serous cavity (*paracentesis*). In the *passive form* the peritoneum appears bluish and inflated; its generating conditions refers to *portal stagnation*.

The *passive congestion* of the abdominal veins, caused, either by cardiac lesions, or by emboli of the inferior *vena cava*, or by compression of the trunk and branches of the inferior *vena porta*, frequently give rise to *ascites*, that is, serous effusion into the peritoneal cavity. The *ascitic fluid* is lemon-colored, oleaginous and contains a few elements, such as (inflated) enlarged leucocytes, some degenerated, endothelial cells, and certain fibrinous flakes. The serous membrane finally undergoes thickening (*solidification*), cellular infiltration and dropping of the endothelium.

The *inflammation of the peritoneum* recognizes many causes. Sometimes it is *localized*, at other times *diffuse*, or it is *acute* or *chronic*. The character of the lesions arises from generating conditions. If due to a bursting *abscess*, to gastric or intestinal *perforation*, or to an abdominal *wound*, etc., the *inflammation is usually suppurative*. The *pus* then contains *pyogenic micrococci*, and occasionally the *pneumonic diplococcus*. *Peritonitis* consecutive to *nephritis*, *rheumatic arthritis*, etc., tends to form sero-fibrinous exudates and exuberant connective vegetations. In the less intense cases, the cure takes place by absorption of the exudates, and frequently *adhesions* are formed between the visceral and parietal layers (*adhesive peritonitis*). *Tuberculosis* frequently attacks the *peritoneum*; the most common form being the *miliary*, and generally coincides with that of other organs. This *serous membrane* may also become affected by a *neighboring tuberculosis* (intestinal, vertebral, pleuritic, etc.).

Like the *peritoneal*, the *pleuritic cavity* may become more or less distended by *serous effusion*, which may be due to *cardiac* or to *renal disorders*, producing stagnation of the pulmonary veins and general circulation. The *hydrothoracic fluid* is slightly yellow, and contains gelatinous flakes, but few epithelial and blood elements. The lungs become compressed, and in consequence, the respiratory field is diminished. *Hydrothorax*, or water in the pleura occurs as a side product of general dropsy, whether due, as stated above, to heart failure or to Bright's disease. The effusion is usually greater on the left side in heart disease, and it embarrasses the breathing and the heart. Its *physical signs* are practically the same as those of *pleuritic inflammatory effusion*.

Inflammation of the pleura occurs, either by propagation of phlogosis from neighboring organs (*lung*, *pericardium*, *ribs*, etc.), or by metastasis of microbial affections (*pyemia*, *typhoid fever*, *rheumatism*, etc.). The character of the inflammation and especially of the exudate is according to the nature of the cause. The *exudate* may be *purulent* (empyema); *sero-fibrinous* and with fibrine clots adhered to the serous membrane, or with loose fibrinous filaments; *sero-purulent*, *hemorrhagic*, etc. According to the amount of the exuded fluid, the lung appears more or less retracted, and the diaphragm and the intercostal spaces without air and compressed. When the *serous exudate* is scanty, it is easily absorbed. The *fibrinous and purulent*,

when imbibed, may leave behind adhering connective surfaces, as well as neo-membranes, which join the cavity and bring together the two layers of the serosa (*adhesive pleuritis*). In some cases of *empyema*, the pus erodes the visceral pleura, invades the lung and escapes to the exterior through a bronchus. *Tuberculosis* attacks also the pleura, either by propagation or metastasis.

Dropsy of the pericardium exists when the effusion in the membranous bag increases considerably the normal quantity (15 to 20 grammes) of the within contained serous fluid. This lesion is due to passive congestion, and often productive of general dropsy.

Pericarditis is a frequent complication of general infectious diseases (*nephritis, scarlatina, variola, rheumatism, etc.*), and hence of metastatic origin. It also occurs by propagation of *tuberculous or purulent inflammation* developed in contiguous organs (*pleura, heart, lung*). A *pericarditis of inferior intensity* is characterized by hyperemia of the two serous layers, leucocytory infiltration and production of an abundant effusion of cloudy aspect, containing leucocytes and endothelial cells in suspension. Sometimes fibrinous clots tenaciously adhere the heart. In *intense pericarditis* besides the alterations of the pericardial layers, an abundant fibrinous exudate is produced, which becomes deposited on both surfaces of the cavity under the shape of cords, clusters and villositities. The aspect of the pericardial exudate has led some to give the condition the name of *villous heart*. Occasionally the *fibronous exudate* sometimes takes the form of an *arterial thrombus*, and from the immediate connective tissue (*external or internal layer of the serosa*) issue vascular thorns, derived from the pre-existing and penetrating vessels in the thickness of the *fibrinous crassa-menta*. Leucocytes and cells accompany now the new capillaries and the exudate becomes organized, elaborating membranes and trabeculas, which adhere to each other the two layers of the pericardium (*adhesive pericarditis*).

When *pericarditis* is produced by metastasis of purulent affections, the effusion is also purulent or sero-purulent. The end of the process, if death does not supervene, is the formation of adhesions and fibrinous thickening of both layers, the parietal and the visceral. There is besides a *pericarditis caused by tubercular invasion*. Metastasis may also occur from *antimycosis*. *Carcinomatous pericarditis* is that associated with

malignant disease of the pericardium, though tumors are very rare here; and there is a variety of *pericarditis* called *dry* because there is no effusion.

After these general considerations I pass now to consider the evolution and termination of *Ascites*, and as this paper is written for homœopathic readers, I shall endeavor to point out, not only the causes of this serous effusion into the peritoneal cavity, but its *semiology*. *Ascites*, true enough, is a symptom found in various maladies, but it has accompanying phenomena, and *alcoholic atrophic cirrhosis* offer us a special field for the elucidation of the *syndrome*. Then again, we must just now remember that in *advance cardiac dropsy* the effusion creeps upwards, first up the lower extremities, then into the scrotum, enlarging the penis; and finally into the hands and even face; but the first internal cavity which suffers from transudation is the *peritoneum*, for local causes are here at work (*portal vein*).

The *onset of Ascites* is generally slow, insidious, latent. It is characterized by a progressive increase of the volume of the abdomen, and by a sensation of tension and weight after meals. In certain cases, the outset is brisk. The period of full development is estimated by *inspection*, *palpation* and *percussion*. By inspection we are able to appreciate the degree of enlargement of the abdomen, which soon takes the form of a *frog's belly*; the flanks are then patulous, the inferior part of the thoracic cavity seems enlarged. The general deformation of the abdomen is symmetrical. The skin is distended and thin, sometimes exhibiting streaks, œdema and more or less developed collateral circulation. The navel is distended by a fluctuating and translucent hernia. When the peritoneo-vaginal conduit is not obliterated, one discovers a concomitant vaginal hydrocele. *Palpation* and *percussion* elicit fluctuation, the undulations of the fluid are sometimes perceived on the integumentary surface. When the patient lies *on the back* there is dulness in the flanks. In the *lateral decubitus* the inferior flank and the umbilical region are dull, the superior flank, on the other hand, is resonant. The *vaginal touch* shows that the uterus is lowered, diminished in weight, and its neck more mobile; in this way one can find out an effusion of about 300 grammes.

Apart from the various *abnormal sensations*, which the condition may have occasioned, we have *functional disturbances* which we cannot overlook in selecting the remedy. The *chief symptoms* attending *Ascites* are due to compression by the fluid.

The *leading phenomena* which we witness are: the embarrassment of the circulation of matter and gas in the intestines, the aggravation of the gastric troubles, the vomiting, the urinary difficulties, the œdema of the abdominal walls and inferior limbs by compression of the vena cava, and the distressing dyspnœa. Of course, the evolution of the malady is different according to the cause. In general, it is slow, intermittent, apyretic, and ends in death or cure.

In these cases more than in others, *pathological anatomy and physiology* should receive due consideration. We must always know what we are treating, for although we can err in *diagnosis* with impunity, we cannot afford to make a wrong *prognosis*. The chief *pathological changes* are found in the *abdominal walls, peritoneum and viscera*. The *abdominal walls* become tenuous; the muscular layers are discolored and atrophic; the aponeurotic fibres dissociated. The *peritoneum* is pale, thin, glossy, and light-colored. In case of irritation, it is red, vascular, inflamed, and contains neo-membranes; it may include carcinomatous nuclei. The *viscera* are displaced, the epiploön is deformed and atrophic.

No less important is the discussion of the *exudate*. In *simple ascites*, the fluid is clear, limpid, transparent, citrine, sometimes greenish-yellow, cloudy. The quantity varies from a few grammes to 30 litres. It foams by agitation, and is slightly alkaline. It contains salts of sodium, serine, and fibrine in lesser amounts than in pleuritic exudate, red and white globules and endothelial cells. It is a *transudate* when its density is inferior to 1012.

There are other varieties of *Ascites* called special, v. g.: (1) *Chyliform ascites*, formed by a milky fluid, due to the presence of emulsified fat; it is poor in salts and albumin, but rich in fat. (2) *Gelatinous ascites* consisting of a viscid, yellow, tenacious fluid, sticking to the peritoneum or to the organs. (3) *Ascites with figured elements*: when it issues from an abdominal tumor, or from rupture of an ovarian cyst; it contains epithelial elements. *Hematic ascites* contains red globules in variable quantity; it is produced in cancer of the peritoneum, and in chronic peritonitis. (4) *Bilious ascites* consists of a greenish fluid, from which it has not been possible to get any bile-reaction; it is due to compression of the bile-ducts in *carcinoma*, or in *hemapheic icterus*.

Ascites may depend on *general causes*, such as *albuminuria*,

leucocythemia, paludic and other cachexia, and may form part of *general dropsy*. Among the *local causes of ascites*, the principal ones are: embarrassment of the portal circulation (*cirrhosis, cancer, syphilis, hepatic cyst, tumor of the spleen or of the ganglia*); and of inferior vena cava (*abdominal tumors, pregnancy, diseases of the heart and of the lungs*).

It may also be due to *inflammation of the peritoneum* (chronic peritonitis), or to *peritoneal irritation* (ovarian cysts, malignant tumors). I may further say that *ascites* chiefly consists in a defect of equilibrium between the exudation and absorption of the abdominal serosity, and that when it is accompanied by a general œdema it is the result of a *cardiac and renal affection*. And yet, we should always bear in mind, that the accumulation of serosity in the peritoneal cavity, no matter how great, is only a *secondary development of the primary œdema*, and, in itself, has no essential importance.

Prolonged ascites will always bring about a more or less marked effusion in the inferior extremities, but this is the direct result of pressure of the fluid on the veins, and due also to the anæmia.

Ascites without anasarca is common in *hepatic cirrhosis*, and may also occur in *mitral stenosis*, and simple *tubercular and carcinomatous disease of the peritoneum* may also cause it. Other etiological factors are: any of the forms of *chronic hepatic atrophy, pressure on the portal vein* in the hilus of the liver by a large gland, and in rare cases *hepatic abscess or cancer*. But above all it is common as a part of general dropsy in *Bright's disease, heart-disease, and chronic lung disease*.

The *differential diagnosis of ascites* demands a careful consideration of its typical features. First, we have the symmetrical distention of the abdomen, a flattened navel, dulness in both flanks with resonance in front, the shifting of the limits of dulness on alteration of posture, the hydrostatic level of the upper limit of dulness, and the results of menstruation. Then we must exclude *simple tympanitis* and *ovarian cyst*. In the latter there is no trouble of the general health, there is no symmetrical distention, the uterus is raised, and the sonority in the lumbar and epigastric regions is not modified by any change of position. In *pregnancy*, on the other hand, the suppression of the menses, the softening of the neck, the foetal tick of the heart, and the ballotement are sufficient to distinguish this phy-

siological condition. In *hydatid cyst of the liver*, the hydronephrosis is of enormous volume, but these cases are very rare.

Lastly, the *characters of the fluid* afford valuable information. If the fluid is limpid, contains little albumin, little fibrine, little sediment, and no figured elements, the *ascites* is due to circulatory disorder (*simple mechanical ascites*). If the exudate is somewhat gliding or slippery and smells like decomposed cheese, and contains plenty of albumin and sediment, the *ascites* then is the result of *chronic inflammation of the peritoneum*. But if the fluid is clear, albuminous, colored, and rich in globules the cause of the effusion is *irritation of the peritoneum*. *Sanguinous ascites* is due to *cancer of the peritoneum* or to *chronic peritonitis*.

The *course of the disease* furnishes also valuable data. A *concomitant ascites* with other dropsies belongs to *Bright's disease*, to *malaria*, and to *terminal cachexias*, as well as to *heart-disease* in the stage of *asystolia*. *Isolated ascites*, on the other hand, spring from *atrophic cirrhosis of the liver*, which is a *slow, progressive ascites*, insidious, oscillating, easily reproduced after *tapping*, very mobile, indolent, with collateral circulation in the right side, especially sub-umbilical.

In *tubercular peritonitis* the abdominal dropsy constitutes a *form with acute onset, called ascitic*, which in young persons is attended by very acute pains, and where the exudate is considerable, but rapidly disappearing. In these cases the febrile symptoms are slight. In *chronic tuberculosis* the *ascites* has a slow and insidious onset; it is encysted, hardly movable and after *tapping* one can feel the peritoneal cakes. In *cancerous peritonitis* the *ascites* is composed of a bloody fluid; after *tapping*, palpation reveals the cancer, and the general condition is very much altered.

Abdominal tumors may complicate *ascites*, in which case one can detect in the fluid a *sensation of ballottement* of the tumor. *Pylephlebitis* (inflammation of the portal vein) is characterized by a *great ascites effusion*, which appears rapidly, and is rapidly reproduced after *tapping* (from 24 to 48 hours). In this variety of *ascites* the collateral circulation is very developed, and there exist at the same time gastro-enterorrhagias and diarrhœa. In *diseases of the heart* the *ascites* is secondary to edema of the inferior extremities and bursæ; it is accompanied by painful hypertrophy of the liver, and the ordinary signs of *asystolia*. The *ascites of nephritic patients* is late and

of little extension. The *ascites of dyscrasic subjects* are also late, not considerable, and accompanied by other edemas. To sum up, we may say that the student should bear in mind that in *simple ascites* (apart from the morbid thickening of the lower abdominal wall) the maximum circumference of the belly is *never below* the level of the umbilicus, and the distance between the pubes and umbilicus is *never greater* than that between the umbilicus and the xiphoid cartilage. As stated above other valuable information can be obtained from the character of the fluid. But important above all is to ascertain the *origin of the effusion*. "Having established the existence of *ascites* it yet remains to ascertain its cause. In the first place, it is necessary to *separate inflammatory from simple dropsical effusions*. Fever, pain and tenderness of the abdomen, sweating and vomiting, are commonly present in greater or less degree in the former, but absent in the latter. *Non-inflammatory dropsical effusions* may be, as stated above, either *renal, cardiac or pulmonary, or hepatic*. In the *first* the *ascites* is preceded by *anasarca* which usually begins in the face, as a rule the fluid is present in other serous cavities; the countenance is pale and pasty, and there are signs of *renal disease*. In the *second*, *ascites* is preceded by *anasarca*, which begins at the ankles and extends upwards; the countenance is dusky or livid, and there are signs of *pulmonary or cardiac disease*. In the *third*, *anasarca* is absent or follows the *ascites*, is confined to the lower limbs; and there are signs of *hepatic disease*. Cancer and cirrhosis are practically the chief *hepatic diseases* which are attended with *ascites*, and the diagnosis between them can be found more extensively in the description of these diseases.

Personally, I must state that habitual spirit-drinking has been the usual cause of the cases of *common sclerosis of the liver* that I have been called to treat. This *multilobular sclerosis*, called in England, gin-drinker's or hobnailed liver, presents in its evolution three important morbid changes, namely, *hyperæmia, exudation and fibroid thickening*. The process is very like that which causes the granular contracting kidney and occurs most frequently in middle aged males. At first the liver may be enlarged, but cicatrization, which chiefly follows the branching of Glisson's capsule around the portal veins, is accompanied by *atrophy and some fatty degeneration of the liver cells*. The *early symptoms* are those of combined gastric catarrh, and *hepatic congestion, or of alcoholism; nausea and*

retching in the morning before breakfast being a marked sign, whilst *diarrhœa* or *constipation* replaces the regular action of the bowels. *Ascites* is often the chief sign when the disease is confirmed; *jaundice* is usually slight; *hæmatemesis* and *melæna* with *piles* and *splenic enlargement* may be expected, and the *veins of the cheeks and abdomen are enlarged*. The *urine* is generally scanty, high colored and deposits a *brick-dust-like sediment*. The *dropsy of the scrotum* is a common attendant. *Emaciation, anemia and debility* are commensurate with the progress of the liver destruction; *delirium, convulsions and coma* may be ascribed to the toxæmia resulting from hepatic degeneration and renal inadequacy.

We should also remember that if *pneumonia* occurs, very often the *typhoid aspect* and *delirium tremens* mask this complication. There is, of course, no cough, no stitch in the side, no sputa, and *the prognosis is serious*. Life, for instance, may be lost from *severe hæmatemesis*. In these cases, *alcoholic neuritis* may complicate the malady.

The diminution in the *size of the liver* is not always easy to detect, and in cases of *assumed atrophic cirrhosis* on removing the ascitic fluid the hard liver evidently enlarged may be felt below the ribs. Most of these processes are not attended with fever, and the scanty urine is not easily explained when *ascites* is absent.

Although the *treatment of Ascites* is necessarily symptomatic, when distress and dyspnœa cannot be relieved by other means *repeated tapping* may become imperative. There are two points no one zealous of his reputation can afford to ignore. The *first* is to ascertain correctly the affection on which the extreme effusion depends, and the *second* to bear always in mind that *tapping* is only palliative as a rule, that its repeated performance is exhausting to the patient, and that often it is worse than useless in ascites dependent on cancer. Tapping, moreover, may become the source of serious mischief, such as perforation of an intestinal loop, formation of a fistula or abscess, and parietal infiltration. Again the *ascitic fluid* is a bad medium of culture and becomes exceptionally infected. In those cases where the effusion is rapidly reproduced, the *disappearance of the ascites* may also lead to a rapid *depletion of the circulatory system*, and as a result we have a consecutive hypotension and an increase in the number of red globules per cubic millimetre.

Without deeply discussing the treatment of this form of

dropsy, I may state, from observation, that many physicians, whenever they cannot remove the fluid or prevent its recurrence, fall into *palliative measures*. This may be a good practice, as far as it goes, but are we to pay more attention to the effusion than to the crippled heart, kidney or liver? *Tapping* is no more, no less, than a convenient expedient and *purging* a Galenic error; why not turn to those remedies which we know are capable of restoring nutritive equilibrium and which so frequently have aided to recuperative process. There are three channels to get rid of the effusion—the *skin, the kidneys and the intestine*—and when the indicated remedies fail, then, of course, we are justified in resorting to *tapping* or *puncturing*. But we must admit that the cure of *ascites* is not obtained by the periodical evacuations of the accumulated fluid; the liver, the heart and kidneys, may essentially demand our most diligent intervention, and any success must come from those fields of action.

Our friends of the old school depend a great deal on special measures, which chiefly consist in the employment of *diuretics, diaphoretics* and *hydragogue purges*. While not discarding any means that may aid the recuperative process, we chiefly prefer *symptomatic medication*. We watch closely the *general condition* and are specially solicitous about the *heart and kidneys*. We always feel more inclined to deal with the patient than with the disease. *Individualization* is of supreme importance in homœopathy. Draining the system of its water has no special attraction for us. I have often seriously taxed our *armamentarium* before I could allay the craving for drink in *cirrhotic ascites*. I have also noticed the bad results following the administration of strong diuretics, when the kidneys were implicated. We should never lose sight of the fact that the kidneys act at a disadvantage from *pressure of the ascitic fluid*. We all can do much better in the *early stages of cirrhotic dropsy* when the liver is still uncontracted, and *peritoneal effusion* has not yet appeared.

Diet should always receive careful attention; it should be light and easily digestible, and the ingestion of alcohol absolutely stopped. The bowels, in many cases, should also be kept active, and *dyspeptic, cardiac, rheumatic, or gouty symptoms* combatted with the indicated remedy. *Rest* in the recumbent posture is of paramount importance, especially so if the heart is implicated, and the part in which there is the greatest effusion

must be elevated and supported. The *anasarcous* limb should also be raised and the *distended scrotum* supported.

Several cases of *tubercular peritonitis* with effusion have recently been successfully treated by laparotomy and washing out the peritoneal cavity. A trial of this method, says Saundby, should therefore be made in suitable cases.

PROSTATITIS, ITS DIAGNOSIS AND TREATMENT.

BY

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(An address delivered before the Homœopathic Medical Society of the County of Philadelphia, February 10, 1910.)

I HAVE selected this subject because I know that the average general practitioner is apt to overlook this rather frequent complication of urethritis; he overlooks it either because he is lazy and careless or because the idea of making a rectal examination upon the male is repugnant to him or he honestly overlooks it in that the salient features of a prostatitis have been forced from his mind in the press of other knowledge, apparently more essential to his success as a general practitioner.

If I succeed in stimulating the lazy and careless brother or if I sufficiently emphasize the inconsistency of that man who makes frequent vaginal examinations without a quiver and yet balks at the very idea of making a rectal examination in the male, or if I am successful in bringing back to the mind of the busy one once more, the essential features of the various types of prostatitis, then I will indeed feel that my effort this evening has not been in vain.

I will not take time to go into the minute details of the anatomy and physiology of the prostate other than to recall to your minds the fact that it is a musculo-glandular structure varying as to shape and size, but ordinarily resembling a Spanish horse-chestnut, weighing from four to six drachms, measuring one and one-half inches from base to apex and one and three-quarter inches from side to side. It lies posteriorly to, and beneath the symphysis pubes and in front of the rectum, being separated from it by the thin recto-vesicle fascia, its base encircles the vesicle neck and its apex touches the deep layer of

the triangular ligament; it is surrounded by the fibrous prostatic sheath, abundantly supplied with vessels and nerves and is pierced by the prostatic urethra into the floor of which it empties its secretion via the prostatic sinuses, some fifteen or twenty in number.

Opinion as to whether or not the prostate is a urinary as well as a sexual organ is divided, but when one considers its muscular structure, its close relationship with musculature of the bladder and its position at the vesicle neck it is at least reasonable to suppose that it has something to do with the act of micturition.

The prostatic secretion makes up a part of the seminal fluid, acid in reaction and theoretically this acidity has something to do with the capability of the spermatozoa to impregnate the female ovum.

You will recall that the prostate may be invaded by a number of different micro-organisms. The principal ones are the gonococci of Neisser, the bacilli coli communis, staphylococci, streptococci and the tubercular bacilli. I desire, however, to limit myself this evening to the ravages of the gonococcus of Neisser.

The various stages and types of prostatic inflammation have been classified variously, but perhaps the best is that where it is said that we may have a hyperæmia, an acute follicular, an acute parenchymatous prostatitis and a chronic follicular and a chronic parenchymatous prostatitis, but for my purpose this evening I will simplify this and say that we may have a hyperæmia, an acute or a chronic prostatitis.

Hyperæmia of the prostate is a condition almost always secondary to some other disease or derangement of the uro-genital system and rectum. Long-continued sexual excitement with or without gratification, masturbation, acute alcoholism, urethritis either acute or chronic, cystitis, pathological conditions of the urethra such as infiltrations and stricture, inflammatory conditions about the rectum and anus, such as proctitis, hemorrhoids, fissures, fistulæ, etc. The ingestion of irritating drugs, such as cantharides, of turpentine and others of a like character.

The symptoms of hyperæmia of the prostate are: a sense of fullness in the deep perineum, a voluptuous feeling as though about to have an orgasm, pain referred to the deep urethra after coitus, there is apt to be premature ejaculation and fre-

quency of urination, not explainable on other grounds. There may be at times a passage of prostatic fluid while at stool.

Diagnosis is based upon the symptoms and the palpation of the prostate through the rectum, it is larger than normal and is full and firm and apt to be very sensitive, the urine passed after the massage of the prostate in this condition is apt to be smoky or foggy.

The prognosis depends entirely upon the prognosis of the underlying conditions.

The treatment is based upon the principle of removal of the cause; in addition to such measures the prostate should be massaged at intervals of three or four days, hot rectal enemata either plain water or normal salt solution daily, hot hip baths and occasionally rectal suppositories containing adrenalin one to one thousand.

Acute prostatitis cannot be so readily dismissed, however. It usually comes on during an attack of acute urethritis, either because the patient indulges in excessive venery or alcoholism or is engaged in some exceeding hard occupation, but the most common cause is the use of strong irritating injections or irrigations during the course of an acute urethritis, even though these measures may have been strongly contra-indicated.

The symptoms are frequency of urination day and night. The stream is slow in starting, small in volume; it may come in drops and the act is exceedingly painful, pain in the deep urethra; there may be terminal hæmituria, sensation of fullness in the rectum, as though a foreign body was there, constant urging to defecate and defecation is exceedingly painful. The patient will walk very carefully and is apt to sit down sideways, and there is profound systemic disturbance.

The diagnosis is made upon the exhibition of the above-mentioned symptoms and the detection of a hard, tense tumor in the position of the prostate, which is exquisitely painful to touch.

The prognosis of acute prostatitis is, generally speaking, good. You may be so fortunate with proper treatment as to restore your patient to health in four or five months, a chronic prostatitis may result or the process may go on to suppuration. The resulting abscess may break into the prostatic urethra and the patient go on to an uneventful recovery or the pus may burrow into the ischio-rectal region and surgical intervention become necessary.

The treatment is absolute cessation of all local treatment, such as injections, irrigations, and instrumentation. The patient should be put to bed, and on a liquid diet, saline catharsis should be induced, large quantities of water should be imbibed, urinary antiseptics such as hexamethylenamine gr. 5 every three hours, or salol gr. 5 every three hours should be administered. Hot rectal enemata, plain water every three hours. Hot hip baths morning and evening and the indicated remedy exhibited, the one most likely to be of service would be either aconite, belladonna, cantheris, canibas sativa, gelsemium, merc. corr., merc. sol. or pulsatilla; if these measures fail to relieve the severity of the attack, you are justified in giving a rectal suppository containing ext. opium gr. one-half and ext. bell. gr. one-quarter every three hours, the prostate should be massaged very gently once in five days during the severity of the attack, but as the symptoms subside this should be done more frequently, say every third day. A return to the local treatment should not be made until all the acute symptoms have subsided and then only with the greatest care and caution.

Chronic prostatitis may follow a hyperæmia or acute prostatitis, not infrequently patients present themselves without any definite history except that no one seems to be able to cure them. The symptoms of chronic prostatitis are variations of the sexual instinct, partial or complete sexual impotency, premature ejaculation, nocturnal pollutions, frequency of urination especially at night. The return of a urethral discharge without apparent cause, constipation, passage of prostatic fluid while at stool, pain referred to various parts of the back, to either thigh, along the course of the sciatic nerve, to the epididymis and so on. Sexual neurasthenia. I have mentioned this last that I might better emphasize it. I venture to say that if the average genito-urinary specialist were asked what two conditions gave him the most concern in his practice, he would answer, chronic urethritis and sexual neurasthenia! In my humble opinion, a sexual neurasthenic suffering with a chronic prostatitis can think of more symptoms and weird combinations of symptoms in five minutes than the average neurasthenic woman can in twenty minutes. He goes the rounds from doctor to doctor, tells his troubles to each, until he hears of a new remedy or a new doctor.

The diagnosis of chronic prostatitis can be made from the above symptoms from the fact that in the "two glass test" the

second glass contains shreds as well as the first and they are of the tadpole or horseshoe nail variety, signifying the inflammatory involvement of the prostatic sinuses, rectal examination shows the prostate enlarged, one lobe is usually larger than the other, it may be smooth or nodular, firm or boggy, and usually one or both of the seminal vesicles are enlarged as well. After massage the urine will be cloudy, have large flakes floating in it or it may contain so-called sagobodies, which are quite clear and transparent, somewhat resembling water-soaked rice. The sphincter ani is almost always tight, giving rise to constipation.

The prognosis is uncertain, so much depends upon the perseverance not only of the patient but the doctor as well. A cure may be brought about after several months' work, perhaps only after several years' work, perhaps never.

The treatment is based upon the idea of cleaning out the prostate by massage and keeping it clean, doing this perhaps every second or third day, following it by posterior irrigation, with permanganate of potash solution, one to three thousand, or the deep instillation of various solutions, such as protargol one-half per cent., of nitrate of silver, of varying strengths, one-half grain to the ounce and stronger. Later the prostatic urethra should be dilated with either a Kollman or an Oberleander dilator followed by the application of protargol, one-half per cent. solution. This should be done at intervals of perhaps seven to ten days. Hot rectal enemata daily for a week and then omitted for a week and then again repeated. Rectal suppositories containing adrenalin one to one thousand may be of service.

Sexual excesses must be avoided. A regular orderly life should be ordered and the general health toned up, the diet should be plain and nutritious. Those measures which tend to keep the urine bland and non-irritating should be adopted.

The successful treatment of chronic prostatitis will call into play every resource that you may have at your command. Various drugs and combination of drugs must be tried; some will benefit one patient and irritate others. Occasionally the treatment must be discontinued for several weeks.

And now, in conclusion, let me say that the man who has cured a case of this kind has performed a splendid service; not only has he done that for the patient which is beyond price, but he has added to his own usefulness and self respect and finally he has relieved his brother practitioners in the community in

which he happens to live of one more chronic case. Their lives are made that much easier and they should rise up (even if they do not) and call him blessed.

PSYCHO-THERAPY.

BY

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(Read before the Philadelphia Society for Clinical Research).

PSYCHO-THERAPY has long passed the stage of derision and deserves earnest scientific investigation of its phenomena. Established conservatism and distrust of new methods are apt to carry us too far. Because psychic remedies represent unseen forces whose modes of action are beyond the ken of man in his present state of development should be no reason for objection by the medical mind, for how much do we really know or understand of the selective affinity of certain drugs for certain organs and tissues.

Do we not realize at times our helplessness and sit by seeing a life ebb away, knowing the utter futility of the recognized treatment; then why not add a new method? Our education has been in too materialistic a school of medicine.

The evil effect on the physical organism of pernicious thought and passion is admitted; let us learn that the good effect of wholesome thought is equally pronounced.

We all use, perhaps knowingly, perhaps unconsciously, psychic forces in our cures. The influence of the physician, his personality, his manners, his mood, influence the patient through his unconscious mind whether he wills it or not. It is not necessary for a doctor to exercise a voluntary control over his patient, that happens anyhow. The individual physician (many a one of us, at least,) is ready to use openly psychic remedies, but is afraid of the public and his clientele, afraid of being dubbed a charlatan or a Christian Scientist.

We cannot deny and laugh down the undoubted cures obtained by mental healers; while many of the reports are inaccurate as to diagnosis and results, still there are authentic cases of relief and cure. Why should we then leave to the laity what is our heritage; there is the same unwisdom of encouraging the laity to practice with

psychic remedies that applies to their indiscriminate use of strong drugs. And I do not mean merely from a monetary view. If there is any virtue in mental methods of healing it is for us to use them as part of our armamentarium. A physician cannot without loss remain insensible to the trend of medicine. Neutrality is not only inwardly difficult, but it is also outwardly unrealizable where our relations to an alternative are vital; of course I will admit that our belief and attitude toward mental healing are not active, it is not a forced option of belief or unbelief, we can remain neutral, but I fear it will become vital, and we had better investigate the evidence with tolerance and with receptive faculties, instead of prejudice and stupid denial.

Development in psycho-therapeutics to be valuable or permanent, must be along scientific lines. While the Emmanuel movement has caused widespread interest, and it is to the credit of its founder, Rev. Dr. Worcester, that he realized the necessity of confining his work to neurotic diseases, and of having such a diagnosis made by a competent physician before treatment is instituted; still, in the future it would seem better if ministers would confine their work to the uplifting of the moral and the spiritual, and the physician to the prevention and cure of physical ills.

That psycho-therapy has existed through all times is evident. Both in the past and present history we can cite examples of mental healing; the so-called miracles of healing of Jesus, the power of healing by laying on of hands of several of the Roman emperors, the miracles at the shrine at Loudres, voodoo cures, charms of all kinds, electric belts, Christian Science. The element in each of these methods was and is faith. Any faith will do, so it is strong, the character of it is a matter of indifference. An atmosphere of faith is indispensable for a cure under any form of treatment. The cure comes from within, and is produced by the "*vis medicatrix naturae*" as a restorative agent, whatever the stimulus, whether psychic or medicinal. The strongest faith met with anywhere is that inspired by Christian Science, this faith is entirely psychic and real, although their postulate "that disease is unreal" is false. The metaphysical basis of Christian Science is too crude and contradictory to be accepted by normal reason, yet we find in their tenets some great truths, *i. e.*, freedom from the fetters of sense and pas-

sion; the power of the soul over the body; the victory of the mind over fear and anger; the promise of an immense amount of immediate good as a result of faith.

Medicine, through experiment, patient study and research, has lost to a great extent, its empiricism, and is becoming scientific. So, in investigating psycho-therapy, the first thought to meet is the question of a dual mind. The proofs of a dual mind would take too long to demonstrate here, but are so certain that any one of us should be convinced of its truth by study. The divisions of the mind are: Objective or conscious mind, this controls voluntary muscular movements and conscious thought; subjective or unconscious or subconscious or subliminal mind, this controls involuntary muscular movements, including organic functions, sensation and emotion, and is the side of the mind open to suggestion.

The action of fear, worry or shock must be through such a medium, and if we grant the power of environment at all, we must admit that there is a power within us to modify and direct the same, otherwise we should be but mere shuttlecocks to emotion. The method of action of psycho-therapeutic measures is not absolutely understood, but that does not signify, it will be demonstrated later. Theories are many. Leavitt says, in substance, that "disease being the result of perverted mental concepts, affecting the brain cortex—not necessarily of the conscious type; a cure is the result of stimuli to same part of cortex—awakening it to health—these may be mental (sub-conscious) or due to medicine." He believes these stimuli to be nervous stimuli.

Hudson believes in histrionic suggestion—that "a disease of the body is a disease of the cells of the body—that the effect of suggestion must be accompanied by laying on of hands, and the action being due to peripheral nerve stimuli through the direct contact of the filaments of living protoplasm in the cells, these stimuli being carried to the brain." The fluidic emanations of Mesmer are also curious.

When subconscious activities, which control our health and moral being and are the result of habits of thought and mental attitudes and environment—are out of tune—what means have we of controlling and altering them? The methods of application of psychotherapy are:

1. Suggestion.
2. Auto-suggestion.
3. Hypnotic suggestion.

The moral treatment as advocated by Dubois is only another name for treatment by suggestion. He persuades a patient that his ills are mental, and teaches him to become master of himself by reasoning with him and so educating his will. Adjuvant treatment is frequently of most benefit by reason of its psychic suggestive effect, as aids to retaining the attention of the patient and in directing it closely to the part affected. The faith of a patient is often insufficient for purely unaided mental treatment. Osteopathy, while it is an improved method of massage, depends for a great part of its success on histrionic suggestion.

Direct suggestion may be entirely mental and may be made through the conscious mind by the voice, or through the unconscious mind during hypnosis, or during sleep, or under anaesthesia, and even at a distance by thought transference or telepathy. This latter is not too impossible for belief, as it has been proven that successful suggestion has been given to a sleeping subject while the physician merely sat at the bedside, without speaking aloud. I do not think the mystery of telepathy in any degree greater than that of the propagation of light and electricity. In applying direct suggestion you must first secure silence and the attention of the patient. When you have your patient under control, *i. e.*, secured his objective attention, get him to relax his muscles (this requires practice to get the best method) ask his aid in concentrating his mind on your words, then begin your suggestions in an earnest tone, not necessarily loud, with deep feeling and sincerity, using suitably selected words. Put all your energy into the suggestions. Repeat them in another form, several times.

On the part of the physician are required mental concentration, earnestness, sincerity, self-reliance, and a firm belief in the efficacy of the methods used. Arouse the confidence of the patient in himself—the true curative power lies there, we but arouse it into renewed activity. Avoid adverse suggestions and introspection as regards medical symptoms.

Hypnosis is absolutely harmless and I can but wish there were laws preventing the senseless public exhibitions, which by their very ridiculousness prevent patients from submitting to this, the best and most powerful field for suggestion. A man under hypnosis can not be so controlled as to commit an act to which his volition had not already given tacit consent. To get

the best post-hypnotic effects the patient should be in Forel's third degree of hypnosis, that of deep sleep, following which there is complete amnesia. The advantage of hypnotic suggestion lies in the fact that there is in this state complete suppression of competing and antagonistic ideas, which in normal consciousness interfere to prevent speedy execution of an idea or suggestion. The success reported by Quackenbos, of New York, is enviable, but can be duplicated.

Auto-suggestion is to be practiced by the patient at home. The best time is when one can be quiet and alone. Some writers say that just before sleep and on awaking are the best times, but, personally, I find concentration rather difficult at those times, and prefer an afternoon half hour. Complete relaxation of muscles must be obtained, then concentration on the part to be influenced, or on the moral idea to be gained, and repeated assertions to oneself of the true conditions and the desired results. By means of auto-suggestion a man can make of himself almost what he will. A doctor of strong moral character can be a factor to uplift his patients to a higher plane. Auto-suggestion during relaxation is of undoubted value to any of us.

You may say that most of this you knew; so I thought as I studied. Suggestion in its therapeutic aspects is like all science, a particular application of common knowledge. Occult power is not to be gained, however, by reading and hunting opinions and references of others, but by thought, introspection and absorption, "As a man thinketh in his heart, so is he." Psycho-therapy requires much patience, and success in it is impossible without an absolute belief in the unity and goodness of all things—the work must be done along moral as well as physical lines. It also makes one more critical in our judgment of the value of all other means of healing. The field of application of psycho-therapy is large—embracing all neuroses that are purely functional, including traumatic neuroses, and many symptoms that may go with organic disease, and yet are neurotic in their character. Drug habits are particularly amenable to mental treatment. Psycho-therapy is never an entire substitute, merely an addition to our present armamentarium for cure, and must be used in harmonious co-operation with careful diagnosis, and physical, surgical, and chemical methods of cure.

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 Prince, Morton.—Dissociation of a Personality.
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THE SALTS OF CALCIUM IN NEPHRITIS.—In the *Semaine Medicale*, M. Tumminia recounts his experience with this remedy in a number of cases of nephritis, treated by him in the hospital at Palermo. He proceeded as follows: The diagnosis of nephritis having been made the patient was kept for ten days on an absolute milk diet, his urine collected every twenty-four hours and chemically and microscopically examined. Then for the next ten days, while continuing the milk diet, a daily dose of $\frac{1}{2}$ to 1 grm. chloride of calcium was given, his urine being examined as before. Then the medicine was discontinued and the urine analyzed for a dozen days more. The blood pressure was also measured before, during and after the treatment. Of twenty cases, Mr. Tumminia obtained on three occasions results almost unhoped for; thanks to the chloride of calcium he saw the daily quantity of urine increase and almost reach the normal, the density was increased, and the albuminuria and casts diminished, and finally entirely disappeared; the blood pressure was considerably raised. In thirteen other cases the treatment gave results which, though not so marked as the preceding, were yet very encouraging; under the influence of the chloride of calcium the quantity and specific gravity of the urine increased, the albumin and casts diminished, and the arterial tension was raised, but the disappearance of albumin and of the renal elements in the urine was not complete. In four patients treatment by chloride of calcium for the ten days effected no improvement.—Dr. Marc Jousset in *L'Art Medical*, November, 1909. (*British Hom. Review*, Jan., 1910.)

FOREIGN BODIES IN THE EARS.—Dr. H. Foster reports (*N. Y. Med. Journ.*, December 25, 1909), eight interesting cases of foreign body in the ear. In each case he successfully removed the object without injury to the parts. He believes that much can be accomplished by the use of an ear syringe and warm water and that this method should always be given the preference before cutting operations are attempted. The objects removed were: 3 screw worms, part of a pencil, bead, stone, grain of wheat, grain of corn, electric light bug, and bit of pencil

EDITORIAL

THE RELATION OF ALCOHOL TO IMMUNITY.

For many years a warm contention has been carried on regarding the value of alcohol in the treatment of acute infectious diseases. It would seem that the results of laboratory experiments during the past five years have tended to show that alcohol is useless, perhaps even harmful, in combatting pathological states dependent upon bacterial infection. For example, the studies in blood pressure show that its effect on the heart and circulation is practically negligible, and consequently its reputation as a cardiac stimulant in such conditions has been very much impaired.

Recent studies regarding the effect of alcohol on immunity show quite conclusively that the administration of alcohol to animals decidedly lowers their resistance to bacterial infection. Abbott has proved this to be the case with the streptococcus, staphylococcus and the bacillus coli; and Laitman found that the dose of anthrax vaccine which is not fatal in normal animals proved so to those to which alcohol had been administered. Parkinson found in his studies that alcohol in small quantities had no effect upon the activity of the phagocytes, and that there was no change until it was present in 12.5 per cent. A small quantity of alcohol injected into rabbits may stimulate the production of anti-bodies temporarily, but a large dose lowers the opsonic index for twenty-four hours; and that continuously administered moderate doses cause a permanent lowering of the index. In animals that had been alcoholized the reaction to vaccines is much less effective than in normal animals, and the difference is still more marked when living micro-organisms are used.

Some time ago Cabot, in a study of the records of the Massachusetts General Hospital, showed that there had been a steady and marked decline in the use of alcohol in the wards of the Hospital for therapeutic purposes. It would seem that this is a fair index as to the attitude of advanced clinicians in general,

and it is reasonable to presume that alcohol will occupy a far less important place in the therapeutic management of infectious disorders in the future than it has in the past.

THE PASTEURIZATION OF MILK.

THE rapid changes of opinion among medical men regarding the preferable method of preparing cow's milk for feeding infants are indeed difficult to understand. It was only a few years ago that the dictum went forth that it was absolutely necessary to sterilize cow's milk in order to make it a safe food for children. Scarcely had the profession impressed this view upon the minds of the laity when it was stated that sterilization of milk rendered it unsuitable for the demands of nutrition, and made the child that was fed upon it liable to scurvy and other abnormal conditions, and Pasteurization was pronounced the proper thing. It was not long, however, before Pasteurization was condemned almost as loudly as sterilization, and modified raw milk was universally accepted as the ideal infant food.

A careful study of the results of infant feeding on milk prepared by sterilization and Pasteurization seems to show that the opinions that were formed regarding the dangers of these methods have been largely over-drawn, and there is much to be commended in the statement of Freeman, of New York, that milk Pasteurized at home renders it safer to the infant than raw milk, and does not alter its chemical composition sufficiently to interfere in any way with the normal processes of nutrition.

It is necessary to bear in mind that an absolutely clean, safe, raw milk is extremely difficult, if not impossible, to obtain on a large scale in our great cities. Sanitary dairies do all that is possible to protect milk from contamination, but it is a well known fact that milk, even when every precaution has been taken, may be the means of spreading typhoid fever, diphtheria and possibly tuberculosis. If such is the case with the higher priced certified milk from high-class dairies, we can readily understand that such diseases must be even more frequently spread by the products of less sanitary dairies from which the vast majority of the population of our large cities are compelled to obtain their milk supply.

The Pasteurization of the milk at home at a temperature of 140° F. for forty minutes is capable of destroying practically all the pathogenic bacteria that we fear in milk. That such Pasteurization impairs the nutritive properties of milk is very doubtful. The experience of the milk depots of Paris, covering a period of over sixteen years, indicates that even with complete sterilization of the milk, scurvy and rickets are extremely rare. The development of scurvy in this country was in all probability more the result of feeding children on very extreme dilutions of milk than on the process of sterilization or Pasteurization.

The commercial Pasteurization of milk is a different proposition. As a rule, milk that is subjected to this process by the dealers is of such poor quality that it would be impossible to keep it from souring until it were marketed unless it were subjected to Pasteurization. If milk is produced in a cleanly manner it will keep sweet until it reaches the consumer. Commercial Pasteurization, therefore, is largely used to make amends for the poor quality and lack of cleanliness in handling the milk, and cannot be too strongly condemned.

GLAUCOMA: DIAGNOSIS AND TREATMENT.—Dr. O. Haab in the *Korrespondenzblatt für Schweizer Aerzte*, 39 Jahrgang, Beilage, 14, find, as a rule, that it is not the general practitioner but the special who renders false diagnosis in certain glaucomatoid conditions, following his untruthful diagnosis by treatment, naturally as equivocal. For example, it is not a rare occurrence that some of these specialists in eye finance confuse chronic glaucoma with gray atrophy of the optic nerve, an error of some gravity for the patient. To avoid such confusion, in addition to repeated pressure tests on different days and at different hours of the day, an accurate ophthalmoscopic examination of the upright image is necessary. Neglect of the upright image is equivalent to inviting its revenge, particularly where the diagnosis of glaucomatous excavation is rendered. Furthermore, repeated careful investigation of the visual field is important. Therapeutically, the author lays down as fundamental, the ancient truth: Do not desist until all remedies have been exhausted, for, the treatment will have to be as persistent as is the morbid condition. Iridectomy, and finally, sclerotomy (especially in children) should be done as soon as possible. Very important, also, is the prolonged and carefully controlled, use of the miotics, particularly pilocarpin, for years, even for decades,—also when the eyes have been operated. There are cases where the regular use of pilocarpin alone suffices to hold the process in check. After operation, likewise, pilocarpin is not injurious, but rather most beneficial, the drops having been taken regularly for as many as 20 years.

GLEANINGS

PRURIGO SIMPLEX.—The general practitioner is not infrequently consulted in regard to a morbid condition, popularly known as "toothpox" (German: Zahnpocken), but not mentioned, ordinarily, in clinical lectures, nor in the text books, as it runs its course without actual need of medical attention and is of slight clinical significance. Since there exist the most varying opinions concerning this toothpox, the writer considered it worth while to study more closely what is known of the syndrome, arriving at the following conclusions: Toothpox is related on the one hand to urticaria, on the other, to prurigo Hebra, but is essentially a disease *sui generis*. The name proposed by Brocq, prurigo simplex, characterizes sufficiently the two most prominent symptoms, the eruption and the itching. The term, prurigo, is additionally justified by the fact that the condition may assume a chronic form, the exanthem having the same predilection, as regards location, as prurigo Hebra. In more than three-fourths of the cases, it was papulous in type, the papules being surrounded by a red areola or by a wheal and capable of change into blebs or pustules. Regression often takes place beneath a scab formation, but there are no scars left. Secondary eczema and lichen are, practically never found. The eruption appears in successive outbreaks, but is never confluent; its favorite anatomic areas are the trunk and extensor sides of the limbs. Differential diagnosis includes, chiefly, varicella, insect bites, and urticaria. The actual cause of the syndrome is not known; in some cases, relatively with processes in the gastro-intestinal tract is undeniable. Usually it disappears, unaided, within 8-14 days. Internal treatment is unnecessary in most cases, and local therapy is symptomatic, and chiefly directed against the itching.—Dr. M. Reber, *Korrespondenzblatt fuer Schweizer Aerzte*, Jahrgang 39, No. 15.

MONSONIA BIFLORA IN ENTERIC FEVER.—A tincture of this plant has been employed by Mr. John Maberly, of Woodstock, Cape Colony, for the treatment of dysentery, and has proved very efficacious in arresting hæmorrhage and curing the disease. Its remarkable power in arresting hæmorrhage from the bowel suggested to him its use in enteric fever. He tried it and it proved so valuable that it became his practice to administer it in all cases in the third week of the disease, the period at which intestinal hæmorrhage is most likely to occur. This success led him to try it in the earlier stage of the fever with the hope of its aborting the attack or lessening its severity, but he found the constipating effect to be so marked as to prove objectionable. He has, however, since isolated from the drug a principle free from this objection, but which, nevertheless, appears to have a favorable influence in shortening the duration of the illness. This principle he has called entericin, and narrates four cases in which it was

given and the temperature became permanently normal on the sixteenth, seventeenth, fifteenth day of the disease. The doses given were from one-half to two fluid drachms every six hours.—*British Hom. Review*, Jan., 1910.

MALIGNANT ADENOMA OF THE LIVER.—This characteristic, sharply delimited neoplasm is found only where cirrhosis of the organ is present, and hence is rarely diagnosed. We may subject the presence of such tumor as accompaniment to cirrhotic liver when single nodes protrude more markedly than the lumps commonly noted in cirrhosis, and are perceptible to the sense of touch exteriorly, or when a metastasis noted by the examining finger points to a new growth in the liver. A rapid increase in clinical phenomena where cirrhosis is present, should lead to suspicion of tumor.—Prof. Ribbert (*Deutsch. med. Woch.*, 1909, No. 37) describes exhaustively the typical anatomic condition present (numerous nodes or lumps of various size, light or dark green in hue), the sharp delimitation of the adenoma against the remaining hepatic tissue, the proliferation of the neoplasm into the greater or less vessels, and the consequent formation of secondary nodes and reviews the subject in the following words:

The malignant adenoma of the liver, built up from its cholegenic cells, is a thoroughly characteristic form of tumor, and not to be confused with primary hepatic cancer, developing from the epithelia lining the biliary channels. A primary adenomal focus develops, from which extension to the remainder of the organ takes place, either by continuity of growth along the vessels, or by metastasis *via* the portal vein. The primary node has its commencement either from liver-cells, displaced by the cirrhosis, or, perhaps, from some nodular hyperplasia already existent.

NEW METHOD OF GROWING TUBERCLE BACILLI FROM SPUTUM, ETC.—In the *Zeitschrift fuer exp. Path. u. Therapie*, Bd. 6. H. 3, Prof. Uhlenhut and Dr. Kersten announce a method of obtaining the micro-organism in pure culture from non-sterile material, a method based upon the fact that the tubercle bacillus and its symbiotic bacteria possess differential energies of growth. The symbiotic bacteria, *e. g.*, the streptococcus pyogenes multiply rapidly and in great number, whilst the tubercle bacillus colonies require from fourteen to twenty-eight or more days for development, a period, therefore, in which they are entirely overgrown, the medium upon which they might have flourished, having been liquefied by the other bacteria. The problem, then, is the riddance in some way or other of the symbiotic organisms. A material capable of killing these latter germs and breaking up the masses of sputal mucus without injuring the tubercle bacilli is, according to Uhlenhut and Xylander, mixture of an alkaline hypochlorite and alkaline hydrate in definite proportions, called antiformin, *i. e.*, the well-known eau de Javelle with the addition of free alkali. The antiformin method is as follows: 20 to 30 cc. of sputum is put into a graduate, 55 to 65 cc. of distilled water and 15 cc. of pure antiformin added, so that a 15% (antiformin) mixture is made. If the above quantity of sputum is not available, the sputum and water and antiformin brought together must result in a 15% antiformin mixture. This, well-shaken, is poured into large sterile Drigalski plates resting upon a black cloth or paper. This

procedure best develops the homogeneity of the sputum, which, according to the quality thereof, occurs in from one to two hours. When liquefaction of the sputum is complete, the flecks of matter remaining at the bottom of the Petri dish are fished out with the platinum loop, placed—to remove the antiformin—for some time ($\frac{1}{2}$ to 1 hour) in normal saline in Petri dishes and carefully broken up or triturated with ordinary solid media and glycerin—beef-serum (6-8 culture tubes). The results are rendered more certain if 10 to 20 cc. of the liquid be placed for a half hour in an ordinary watercentrifuge; the antiformin poured off, from the sediment, replacing it with sterile normal saline, and these two thoroughly shaken together. After a half hour more of centrifugation, the saline is drawn off and the sediment rubbed upon the surface of the media chosen. The cotton plugs are then flamed and the tubes sealed with paraffin. Naturally, all of these manipulations must be sterile in execution. By this antiformin method, we are able to get pure cultures of tubercle and other acid-fast bacteria from sputum or other contaminated material. This, however, does not imply that the guinea pig is now a negligible factor, particularly where the tubercle bacilli are few in number in the material to be investigated, for, in the guinea pig there is great increase in the number of the bacilli, and the diagnosis is, therefore, more certain. Yet the antiformin method has practical value also in the examination of sputum, for, after sputum has been liquefied and made homogeneous by antiformin and then centrifuged, even scanty numbers of tubercle bacilli may be demonstrated in the sediment.

EPIDEMIC CEREBROSPINAL MENINGITIS STATISTICS.—Dr. Ch. Dopter, in the *Bull. et men. de la Soc. med des hop. de Paris*, 1909, No. 24, gives the results of the cases of epidemic meningitis treated with the anti-meningococcal serum prepared in the Institute Pasteur. Before serum treatment was instituted, the mortality in some epidemics was 100%; on an average, 60-70%, whilst that of cases where the serum was used, averaged 15.86%, and, deducting cases where the patient was moribund at the time, as well as those dying of sequelæ after the cessation of the primary infection, the mortality was 10.32%. It was thus demonstrated that the serum obtained from animals infected only with living cultures of the coccus was more efficacious than that from animals infected with a mixture of meningococci and toxins. Success depends upon early diagnosis and immediate use of the serum in adequately large and frequent dosage. There are, however, disregarding rapidly fatal cases, instances where the serum fails, either because it is used too late or because the morbid process is hypertoxic, the latter form being characterized by abundant petechiæ, as well as complications due to extrameningeal localization of the coccus—bronchopneumonia, pericarditis, nephritis. A third group is composed of cases where the cerebral symptoms are extremely prominent, the convexity of the cerebrum being attacked by the anatomic process. Furthermore, there are cases, where, under the action of the serum, the meningitis symptoms regress somewhat, but the condition enters a chronic phase, and the use of serum is ineffectual. In these instances a subcortical encephalitis or small secondary brain abscesses may be inferred. It is also possible that the serum, because of insufficient diffusion, has been unable to reach

the ventricles, where the meningo-coccus frequently colonizes. In such a case it is perhaps advisable to trephine and inject the serum sub-arachnoidally and, by synchronous lumbar puncture, establish a drainage.

THE REFLEXES IN HYSTERIA.—In view of Babinski's assertion that hysteria is incapable of modifying the tendon reflexes, Philip Coombs Knapp studied the reflexes in one hundred cases of hysteria, presenting a difference in sensibility in the lateral halves of the body. In this series there was some exaggeration of the tendon reflexes in 86 cases and pseudo clonus was elicited in 7 cases. Among healthy individuals in a state of considerable excitement Thomas and himself had found the tendon reflexes increased, but the proportion is greater in cases of hysteria and neurasthenia. Loss of the patellar reflexes or presence of true clonus would mitigate strongly against the diagnosis hysteria in any suspected case. In his investigations with Thomas, however, temporary loss of the knee jerks was found in Marathon runners. In 38 of the hundred cases of hysteria the tendon reflexes were greater on the anæsthetic side and in 19 they were exaggerated on the opposite side. Of 51 cases the abdominal reflex was diminished, or lost, on the anæsthetic side in 24 instances. Not any of the cases presented the Babinski sign.—*Jour. of Nerv. and Mental Dis.*, Feb., 1910.

CHARLES D. FOX, M. D.

POLYGLANDULAR EXPRESSION OF THE EMOTIONS.—Operating on dogs Du-mas and Malloizel secured fistulæ leading from the ducts of the submaxillary glands, from an isolated cul-de-sac of the stomach, and from the ureters. Genital Excitation: Manual stimulation produced unimportant augmentation of the salivary flow and secretion of 6 c. c. of gastric juice in 3 minutes. Extreme salivation resulted from the presence alone of another dog. Coitus produced an excessive flow of saliva and the secretion of 39 c. c. of gastric juice whose acidity (H. Cl.) was 3.40 grammes per liter, while the acidity following a meal was 5.12 grammes. During repose 6 c. c. of urine was passed in 5 minutes. Simple contact with another dog raised the amount to 9 c.c. Anger: Abundant secretion of saliva—10-15 c.c. in 5 minutes—occurred when the dog was enraged. Under the same conditions 13 c.c. of urine was passed and there was secreted 3 c.c. of gastric juice whose acidity was 1 gramme per liter and which contained much mucus.—*Journal de Psych. et Path.*, January-February, 1910, p. 62.

CHARLES D. FOX, M. D.

EPIDEMIC POLIOMYELITIS IN MONKEYS.—The resemblance between epidemic cerebrospinal meningitis and epidemic poliomyelitis is great. In addition to the passage of the diplococcus intracellularis from the cerebrospinal membranes to the nasopharyngeal mucosa it is highly probable also that the reverse occurs. Intracerebral injections in monkeys of preparations of the mucous membranes of the nasopharynx of other monkeys recently paralyzed have been successful in reproducing the disease. As experimental results show that the virus of poliomyelitis is eliminated by way of the nasopharyngeal mucous membrane and as the same path may

be traversed in the course of infection it is desirable, as a prophylactic measure, to destroy the secretions from the nasal and buccal cavities.—Flexner and Lewis, *Jour. of the A. M. A.*, February 12, 1910.

CHARLES D. FOX, M. D.

THE PROPHYLACTIC USE OF TETANUS ANTITOXIN.—Twenty-five days after a compound comminuted fracture of both bones of the leg the patient developed tetanus, even though 1500 units of antitetanic serum was injected subcutaneously five hours after receipt of the injury. The author, Charles J. Rowan, concludes that while 1500 units of serum will prevent tetanus when used early in case of wounds not followed by severe infection, the procedure may fail in the presence of a mixed infection that lasts longer than ten days to two weeks. Consequently it would seem advisable to repeat the prophylactic dose once a week while the infection continues.—*Jour. of the A. M. A.*, February 12, 1910.

CHARLES D. FOX, M. D.

A NEW PHENOMENON AFFECTING THE LOWER EXTREMITIES OBSERVED DURING THE COURSE OF MENINGITIS IN CHILDREN.—J. Brudzinski, who first described the "contralateral phenomenon" in meningitis has recently (*Przelg. Pedj.*, No. v., 1909—Polnisch) called attention to another sign which he designates "Nackenphänomen" (neck-phenomenon). The first, or contralateral phenomenon consists in the active flexion of one extremity on passive flexion of the other while the neck-phenomenon is manifested by flexion of both lower extremities in the knee and hip joints on bending the neck forward. Brudzinski has made a comparative study of the relative frequency of the Kernig, Babinski, contralateral and neck phenomenon in a series of 25 cases of disease of the cerebral meninges (epidemic cerebrospinal meningitis; tubercular, suppurative and serous meningitis) and in one case each of meningismus, encephalomyelitis and mongelism. Following are the results: Kernig phenomenon, present, 11 times; Babinski phenomenon, 12 times; contralateral phenomenon, 18 times; neck-phenomenon, 28 times.

In the Mongolian idiot the writer explains the presence of the phenomenon on the basis of defective cortical development; in three other such cases with less pronounced retardation of cerebral development the sign was absent.

The writer is at a loss to explain the nature of the phenomenon; the same holds good in the case of the Kernig sign which is also difficult to explain.—*Jahrbuch für Kinderheilkunde*, February, 1910.

C. SIGMUND RAUE, M. D.

PASTEURIZATION OF MILK.—Roland G. Freeman in speaking of the views held by American pediatricists on the subject of the pasteurization of milk in infant feeding points out how public opinion in this country swings violently from one extreme direction to another with insufficient evidence. The points of practical importance to be decided in a discussion of the subject are in the first place, "is it possible to obtain a perfectly pure, safe raw milk?" and secondly, "if not, is milk injured by heating sufficiently

to destroy the harmful micro-organisms commonly present in raw milk?" Of the diseases spread by means of raw milk tuberculosis is one of the lesser dangers. Many other dangers, however, attend the use of raw milk and therefore, if there can be no absolute security in the use of raw milk, why not use a heated milk in which there is security?

The belief that heated milk is responsible for malnutrition, rickets, and scurvy is not based upon fact. Abroad, where sterilized milk is almost universally used, this belief is not held. (In Vienna where boiling the milk is a general custom, scurvy is very rarely observed.)

The degree of heat required to destroy the bacillus tuberculosis and other organisms feared in milk may be placed for practical purposes at 175 degrees F. for twenty minutes, 155 degrees F. for thirty minutes, and 140 degrees for forty minutes.

Freeman tabulates the following conclusions:

1. There is no absolute safety in any raw milk.
2. Commercial pasteurization of milk employed to keep it sweet until it can be marketed should be condemned.
3. Milk is in no way injured, either in taste or by chemical change or action on ferments, by pasteurization at 140 degrees F. for forty minutes.
4. Pasteurized milk does not cause malnutrition or scurvy or rickets.

—*Jour. American Med. Ass.*, Jan. 29, 1910.

C. SIGMUND RAUE, M. D.

OPHTHALMIA NEONATORUM.—One of the earliest symptoms is a small pearly globule of secretion, not unlike a tear, generally adhering to the inner canthus, which may occur as early as twelve or fifteen hours after birth. If at the end of the first day this globule should become more opaque and increase in viscosity, you will recognize the transitional stage from a catarrhal to a mucopurulent secretion, and if this globule should subsequently assume a yellowish tinge, pus is beginning to form, and the danger signal is before you. To hesitate at this stage may be serious. Within twenty-four to thirty-six hours after such appearances, the symptoms may develop with a rapidity and intensity out of all proportion to the original manifestations. The upper eyelid becomes swollen and edematous, the eye lashes adhere by reason of the exuding pus drying upon them, the bulbar conjunctiva becomes distended from underlying exudation (a condition known as chemosis), sometimes almost completely burying the cornea, and what was once a mild and easily controlled case has progressed to a refractory and often hopeless one. The other eye soon becomes affected. If untreated the discharge may become bloody. The constant pressure of the discharge upon and its contact with the cornea soon affects that structure, usually about the tenth day. The cornea now assumes an opaline tint and progresses toward ulceration unless appropriate treatment is instituted; if not, or if it is too late, perforation of the cornea will occur, the iris will prolapse into the wound, the lens will be injured, and as nature attempts resolution, the contents of the eyeball becomes disorganized and the eyeball shrinks.—*The Homoeopath. Eye, Ear and Th. Jour.*

WILLIAM SPENCER, M. D.

THE VALUE OF CYCLOPEGIA IN REFRACTION.—After twenty-eight years of experience in refraction work I am convinced of its absolute necessity in

many and its great value in nearly all cases. My words will show that a very large proportion of my patients who had been previously and unsatisfactorily fitted with glasses by other oculists, had been examined without the use of cycloplegies. So far as I have been able to watch the results in my own practice, the failures of refraction work have been far less when fitted after cycloplegies than when none were used. In exclusive ophthalmic practice when patients as a rule are seen but a few times at most, fitted with glasses which if correct will require no change for two years at least, and in children may remain correct for thirty or more years, it is almost impossible to know if one's work is satisfactory to the patient, or what proportion are dissatisfied and are seeking other oculists. I am sure, however, so far as I can trace my results, that I am holding a very much larger proportion of my patients fitted after cyclopegia than those fitted without its use.—Dr. A. B. Norton, *The Homoeopath. Eye, Ear and Th. Jour.*

WILLIAM SPENCER, M. D.

PHLYCTENULAR CONJUNCTIVITIS REGARDED AS A TOXIC-TUBERCULIDE.—The pathogeny of phlyctenular affections of the eye still remain an obscure chapter of ophthalmology, despite the frequency of the conditions. Bach and Smith have insisted upon the etiologic importance of the staphylococcus; Kneis and others, upon the intimate relationship between phlyctenular conditions and certain affections of the nose. All writers agree upon one point, namely, that scrofulosis plays an important part in the etiology. Amongst children suffering from phlyctenular disease, A. von Graefe found 25 per cent. were scrofulous, while the proportion was given as 63 per cent. by Hirschberg and 80 per cent. by Axenfeld. Carlotti obtained positive results from the ophthalmo-reaction in four cases of phlyctenular kerato-conjunctivitis. Weekers, of Liege, has been struck by the analogies between the eruption of phlyctenular Kerato-conjunctivitis, on the one hand and certain toxi-tuberculides of the skin, on the other—such as lichen scrofulosorum which contains no specific bacilli and which, when inoculated into animals, yields a negative result. On this view, toxi-tuberculides are due to the irritative action of tuberculous toxins fabricated by some tuberculous foyer, thrown into the circulation, and then carried endogenously to the conjunctiva. Certain facts tell in favor of Meeker's theory. Thus, conjunctival phlyctenulæ sometimes make their appearance in tuberculous subjects who are being treated by tuberculin; and, everybody has seen phlyctenulæ appear as a complication of the ophthalmo-reaction, which, after all, is only the contact of tuberculin with the conjunctiva. To Meeker's mind, the phlyctenulæ which appear as a complication of the ophthalmo-reaction are to be regarded as experimental toxi-tuberculides. Meeker scarified the skin with the instrument devised by V. Pirquet, and Koch's old tuberculin, diluted one-quarter, was used. Among 58 children a positive result followed the vaccination in 51. Clinical observation is thus confirmed by experimental evidence, and that phlyctenular diseases often develop upon a tuberculous soil is rendered certain.—*Ophthalmoscope.*

WILLIAM SPENCER, M. D.

POST OPERATIVE PAROTITIS.—Morel (Paris) writes that this affection may occur in operated patients even in the absence of existing or surgical infection. These inflammations ascend from the mouth and are usually due to staphylococci. No theory sufficiently explains the occurrence for they are not related to genital trauma nor to nervous reflexes of abdominal origin. The parotid like all glands becomes infected when it is robbed of its own protective powers, and among the main means for this protection is the flow of saliva. If the normal function of the parotid is disturbed, as by the removal of fluids from the body or by interference with excretion, the advance of the buccal flora into the duct of Steno is favored. This inflammation may appear even after aseptic laparotomies, are similar to those in hemiplegia and cachexia, and often terminate in abscess. The prognosis is generally favorable. The treatment consists in the application of moist heat, massage, and possibly incision in severe cases. As preventive measures too much fluids should not be removed at operation, and attention to disinfection of the mouth given afterwards.—*Abstr. Zentralbl. f. Gyn.* 1909, 1685.

THEODORE J. GRAMM, M. D.

MODIFICATION OF THE URINE IN ECLAMPSIA. In speaking of this subject, Daunay says that the first effect of the eclamptic poison is to cause decrease of urine. From this, however, it cannot be concluded that there is a hepatic or renal degeneration. In every intoxication disturbance of function precedes the cell changes, and in all of the cases examined by the author the urine showed more quantitative than qualitative changes. The suddenness with which the quantity of urine and of the solid contents diminish and then again to increase, and the rapidity with which these processes occur, are not in accord with the assumption of pronounced anatomical changes. Sometimes the eclamptic poison seriously affects the renal epithelium and in such cases both the quantity and the quality of the urine are altered; if the kidney changes really play so important a part in eclampsia, such must be the case at this moment, for only here the retention acts upon the specific renal elements, and at this moment a condition of intoxication is produced.

The fact in itself that a woman may die from eclampsia, even with profuse discharge of urine, proves that retention is a secondary phenomenon and that the eclamptic condition is not under the influence of a simple intoxication from retention. Investigations have shown that eclampsia may exist without anatomical changes or with slight kidney lesions. The presence of albumin in the urine, may therefore be explained by the fact that the eclamptic poison throws a large quantity of nucleoproteids into the circulation. The first stage of discharge of these bodies brings albumin and nuclein with it, and the action of the eclamptic poison is so severe that there is not sufficient time for the organism to use up this albumin, and hence it appears in the urine.—*Abs. Zentralbl. f. Gyn.* 1909, 1686.

THEODORE J. GRAMM, M. D.

HYPEREMESIS GRAVIDARUM AND ADRENALIN THERAPY.—Ribaudi (Genoa) has published a noteworthy observation of the therapeutic effect from adrenalin in a severe case of vomiting of pregnancy. After describing the

well known clinical picture, he says two theories have been advanced for explaining the condition. According to one, the nervous theory, the vomiting is determined by irritation proceeding from the uterus to the nerve centers, and these irritations are the more pronounced as the genital tract is in a less nearly normal state from displacements, tumor, cervicitis, stenosis, &c. The second or toxic theory assumes that the vomiting is to be ascribed to the toxins of pregnancy of maternal and ovular origin, and is to be regarded as a part of the toxæmia of pregnancy. According to both of these theories an irritation is transferred to the nervous center governing vomiting, from which reflexly antiperistaltic motions arise in the upper digestive tract. This center is situated in the medulla close to those governing mastication, swallowing, salivation, sneezing, and the vaso-motor center. This is the reason why during vomiting, nausea, salivation, sneezing, various vaso-motor modifications occur, and conversely why vomiting takes place from irritations affecting neighboring nervous centers. The observation of the relationship between the genital function and the vaso-motor center is particularly interesting. The author enlarges upon this and cites several well known examples.

The relationship between these several centers is so intimate that it explains how special disturbances of genital origin may make their action felt in the vaso-motor centers. The author believes the converse is also true, and this indicates how certain remedies affecting the condition of the vaso-motor center may serve to affect the function of the vomiting and neighboring centers. Along these lines the secretion of the adrenals may possess the ability to regulate the vomiting center and thus limit the vomiting of pregnancy. Adrenalin has been used in various ways by a number of physicians with good results. Several hypotheses have been proposed to explain these. Some believe the effect due to the tonic action of adrenalin upon the neuromuscular system and upon metabolism. Others emphasize its antitoxic action, since the preparation is ineffective in women who present symptoms differing from those present in the toxæmia of pregnancy. If either or both of these hypotheses be correct, the beneficial effect of adrenalin cannot be doubted.

The author then describes a typical case of vomiting in the third month of pregnancy which had resisted much other treatment, so that there seemed to be no other hope but for premature delivery. The author continued the nutrient enemata previously used, and in addition gave ten drops morning and evening of 1 to 1000 adrenalin solution. For the first three days twenty drops of laudanum in water was administered per rectum. The result was promptly favorable. On the second day the incessant vomiting ceased, and gradually the separate attacks of vomiting became more infrequent, so that on the third day the patient could retain some iced nourishment. On the fourth day the quantity of food was increased, and on the sixth day the vomiting spells and the morning sickness had entirely disappeared. On the eleventh day the daily dose of adrenalin was diminished to ten drops, and this was continued for nine days longer. After this the pregnancy continued and terminated normally.—*Zentralbl. f. Gyn.* 1909, 1523.

THEODORE J. GRAMM, M. D.

THE PULSE IN THE PUERPERIUM.—Blain has found that normal pregnancy influences neither the pulse nor the arterial tension. Every acceleration of the pulse should suggest a complication. During expulsion the frequency is increased and is greatest at the moment of extrusion of the head. In the puerperium the pulse becomes slowed, but there is neither increased nor diminished tension. In transient albuminuria the pulse remains normal but becomes more frequent in the chronic form, and serious cases of autointoxication (eclampsia) are associated with hypertension. Restoration to health is only to be expected when the tension again becomes normal. In vomiting of toxic origin the pulse is normal in the beginning, but gradually increases, while the arterial tension diminishes. In every hemorrhage either during pregnancy, labor, or the puerperium the pulse frequency is increased and the arterial tension falls; the same is true in prolonged continuance of the labor pains. In an infection proceeding from the genitals the pulse rate is always high, and is of two kinds: either it is high in proportion to the temperature, or there is a great disparity between the two—the latter cases are to be the most feared. If with normal temperature the pulse become rapid, we should think of a venous infection and embolism is to be feared. In pronounced phlebitis the temperature rises at first and later falls, while the accelerated pulse continues somewhat longer. In congestion and glandular infection of the mammæ there is neither rise of temperature nor of the pulse rate; the latter is only accelerated when the fissures become infected or lymphangitis supervenes. In abscesses of the breast the pulse is affected as in all suppurations.—*Abs. Zentralbl. f. Gyn.* 1909, 1689.

THEODORE J. GRAMM, M. D.

INFECTION OF THE AMNIOTIC FLUID.—Veteau says the amniotic fluid usually remains sterile until the end of labor. Its infection is a rare occurrence and is always induced by mixed microbes. The anærobic forms predominate and among them almost exclusively are the coli bacteria and the pyogenic. The origin of the infection is twofold: heterogeneous and autogenous. The germs of autogenic infection come mostly from the vagina, more rarely from extra-genital sources, from the intestines. Pre-disposing causes are: Premature rupture of the membranes, maternal or infantile dystocia, and artificial premature delivery. Still infection is often found with entirely uninjured ovum. An undeveloped, moderate and serious form are found in these infections. The former often remains unnoticed; the moderate variety which most frequently occurs, displays as the main diagnostic symptom some elevation of temperature and sometimes foul smelling amniotic fluid; the more serious form is associated with a collection of gas and putrefaction in the uterine cavity, and is unmistakable. This condition is associated with a bad prognosis for the mother, and is still worse for the child; in the latter the infection involves mainly the respiratory and digestive tracts; skin and eye infections are seldom seen; and only exceptionally is there infection of the navel. The best prophylaxis is the avoidance of premature injury of the membranes by means of rest. On the other hand rapid termination of labor is not always an effective remedy.—*Abs. Zentralbl. f. Gyn.* 1909, 1689.

THEODORE J. GRAMM, M. D.

TRANSVERSE POSITION. VERSION. EXTRACTION.—The statement of another author that about 2,000 children and 400 mothers die yearly in Germany in consequence of transverse position of the child, has prompted Schlitze (Jena) to consider these subjects. A review of statistics seems to indicate that the transverse position is encountered in about 7.5 *pro mille*., and the author estimates that about 13,500 children come to term in the transverse position, and of this number 4,000 lose their life during birth. These figures suggest the urgent requirement to change this position before the advent of labor or at its beginning to one of the head. If this be done the chances of infant death are reduced to one-tenth of those now occurring. Since this is not the procedure usually employed and because but few cases are left to nature, that the large infant mortality occurs when podalic version is performed, and particularly when immediate extraction is done. Schlitze then points out that when version is accomplished the indications called for by the transverse position have been met, and that for immediate extraction there should exist indications just as for every other obstetric operation. He summarizes his views in saying that by waiting for complete dilatation of the os, when transverse position of the child alone has been the indication for version, and then by waiting for spontaneous delivery as long as there are no indications for extraction, many of the 4,000 cases would be saved, who now die every year.—*Monatsschr. f. G. u. G.* Vol. 30, 145.

THEODORE J. GRAMM, M. D.

THE OPERATIVE TREATMENT OF PURULENT PERITONITIS.—Hirschel (Heidelberg) had 110 cases, of which 75 recovered and 35 died. Perforative appendicitis, of course, furnished the main contingent, 65 cases of which 30 recovered. Peritonitis originating from the gall bladder was seen in 7 cases, all of which died. Nine cases were due to perforation of the stomach and duodenum; only 2 were saved. Intestinal perforation was observed 15 times, and of these 2 were saved. Peritonitis following dysentery, enteritis and bladder rupture, each one case, terminating fatally. Cases due to disease of the female genitalia numbered 5, 4 of which died; 2 cases were puerperal and died; 3 cases from pyosalpinx. One case of gonorrhoeal peritonitis recovered.

The most reliable diagnostic sign of beginning or existing peritonitis was tension of the abdominal walls with costal type of respiration. The importance of the pulse rate was secondary. The tongue is significant; if moist, and the pulse below 100, the prognosis is good. The treatment in almost all cases consisted in abdominal section, removal of the exudate and thorough cleansing of the abdominal cavity, and counter openings. The perforated organ was rapidly sought or closed. Irrigation was only used in cases of sudden flooding of the peritoneum with exudate or when the peritonitis was suppurative and the discharge thick; otherwise dry mopping was used. After operation the patient was treated lying with shoulders slightly raised. morphia in small doses administered; physostigmin seemed to act favorably; in obstinate intestinal paralysis, intestinal fistulæ were made; subcutaneous infusions of salt solution were used in the usual manner.—*Abstr. in Zentralbl. f. Gyn.* 1909, 1512.

THEODORE J. GRAMM, M. D.

THE SURGICAL TREATMENT OF EMPYEMA THORACIS.—Tennant advises: An opening of reasonable size and stability, best secured by subperiosteal single rib resection; entry into all pockets of pus, breaking down encapsulations with finger or probe; introduction of several large drainage tubes. Suction on each tube, with large syringe, several times daily, to remove all coagula. Removal of the tubes as soon as they have done their work, usually on the fifth or sixth day. Application of the Bier cups (if there is no bronchial communication) and forceful expiration, to secure lung expansion; the cup applied one-half hour at a time. In Tennant's experience the wound closes within 17 days by this plan of treatment.—*Annals of Surgery*.

A NEW METHOD OF FINDING THE TUBERCLE BACILLUS.—Owing to the extreme difficulty of finding the tubercle bacillus in the sputum, in many instances, a new method of separating the bacilli from the sputum by the employment of antiformin and ligroin has been devised.

The principle is that when a mixture of many bacilli are shaken up with a hydrocarbon the tubercle bacilli separate out from all the others. It is probable that the tubercle bacilli, by virtue of their wax-like covering, adhere to the fat-dissolving hydrocarbon more strongly than to the watery medium, and when the lighter hydrocarbon drops rise to the top the tubercle bacilli rise with them. They are found abundantly at the margin of the two fluids.

The following is the technique of George Bernhardt, of Berlin:

1. To 5 c.c. of sputum in a covered graduate add 20 c.c. of a 20 per cent. solution of commercial antiformin. Stand at room temperature (more quickly in an incubator) until fully liquified, shaking frequently, one-half to several hours.

2. Add 25 c.c. of water. (This is advisable but not necessary.)

3. Add enough ligroin to make a layer 3 to 5 millimetres thick. Shake strongly to a thick emulsion.

4. Stand at room temperature until sharply separated; 20 to 30 minutes (more quickly at 60 degrees in a water bath).

5. Sufficient loopfuls from the junction layer directly beneath the ligroin placed on the same spot on a warm object glass.

6. Fix and stain as usual.—*The Chironian*.

TREATMENT OF SUBDURAL HEMORRHAGE.—During the past decade early operation has come more and more into favor in subdural hemorrhage, while the expectant treatment has fallen proportionately into disrepute. The factors largely responsible for bringing about successful results in the operative treatment of this class of cases are the advancement in methods of diagnosis and the vast improvement in operative technics. Murray voices well the modern idea, at the conclusion of an article advocating early operation in intracranial hemorrhage, thus: "The result of hemorrhage, whether it be extradural or subdural, is always the compression of the brain by clot, and the sole indication of treatment is removal of the clot, and checking the hemorrhage. The important point for the surgeon is to recognize the presence of intracranial hemorrhage and if the symptoms of compression are severe, to immediately relieve the compression, no matter what may be the source of the hemorrhage."

Whereas formerly only a few selected cases of subdural hemorrhage were deemed operable, we now extend operative aid to a variety of such cases. The least favorable from an operative standpoint are those in which the rupture of one of the larger arteries result in very rapidly progressive general compression which speedily involves the vital centers; here the very nature of the injury bespeaks severe accompanying lesions, especially concussion and fracture of the base. The prognosis is undoubtedly bad whether we operate or not but, with quickly increasing bulbar compression, operation takes no chance from the patient and in a small percentage of cases makes for recovery. It is true that as yet comparatively few of these cases have come to operation, but if only one in one hundred survive, we are justified in giving to the patient his one chance for life. At the same time the surgeon should not fail to make it clear to the patient's friends what a small chance operation offers. Cushing puts it thus: "In cases of generalized compression from widespread hemorrhage, when there are no localizing indications, the intracranial tension should be relieved by elevation of a large osteoplastic flap from one hemisphere or the other, with a corresponding opening in the dura."

As for the other types of subdural hemorrhage, before mentioned, there is not one that does not demand early decompressive measures.

Complete recovery without operation in cases of subdural bleeding severe enough to give symptoms, is a rare event; the cases which do recover are the ones of slight pial bleeding which give no symptoms and only show, in the post-mortem room, by slight discoloration of the dura, with possibly very fine adhesions. Cases diagnosed as subdural hemorrhage that recover completely and without operation, are probably in most instances really conditions of cerebral edema.

"Trephine and trephine early," said Jacobson nearly a quarter of a century ago, in reference to extradural hemorrhage, and this oft-quoted advice, applicable as well to the subdural variety has never been improved upon.—McGraw, *Amer. Jour. of Surgery*.

WORRY AND AMBITION AS CAUSE OF ARTERIOSCLEROSIS.—Herz states that he is becoming more and more impressed with the fact that his patients with arteriosclerosis are almost invariably those who take life too seriously and either from ambition or exalted sense of duty lead an especially strenuous life. His arteriosclerotic patients seldom include the care-free, self-centered people who enjoy life from day to day, without worrying. These seem to escape arteriosclerosis unless they acquire it indirectly by the syphilis route. He regards all this as an important guide for treatment and especially for prophylaxis of arteriosclerosis. By emphasizing more than ever the dangers of worry and undue strenuousness, and urging patients to take greater advantage of the sunshine of life and to refrain from a too serious view of responsibilities and care for the morrow, he is convinced that much arteriosclerosis can be warded off.

DIETETIC TREATMENT OF NEPHRITIS.—Floystrup expatiates on the great importance of recent acquisitions in medical science in respect to the elements that favor nephritis. It is evident that the dietetic regulations must be different according as the nephritis is acute or chronic parenchymatous

or chronic interstitial nephritis. These three main groups of nephritis differ in their pathologic anatomy, the functional capacity of the kidneys and the treatment required, but the difference is most marked, perhaps, in regard to the diet indicated in each. Experience has demonstrated that uremia is most liable with interstitial nephritis, contracted kidney, while dropsy is most liable to accompany the parenchymatous form. The development of uremia is promoted by ingestion of albumin while dropsy is promoted by ingestion of salt. The indications therefore with interstitial nephritis are to restrict as much as possible ingestion of meat, eggs and albuminous substances in general, while with parenchymatous nephritis all that is necessary in this line is to limit the intake of salt. In acute nephritis there is a tendency to both parenchymatous and interstitial disturbances, and consequently the diet should exclude both albuminous substances and salt. Milk is useful on this account, but he warns expressly that a strict milk diet is injurious if kept up for more than 6 or 8 days at longest. It may also prove useful in the acute exacerbations observed in the course of chronic nephritis, but it must be borne in mind that it represents always undernutrition which cannot be relied on for more than a brief period to tide the patient past some acute phase.—*Jour. A. M. A.*

SEROTHERAPY OF PURULENT PROCESSES.—One hundred and sixty carefully observed cases form the basis of Gergo's communication. In the treatment of abscesses of the soft parts (128 cases) repeated injections and aspirations of the abscess cavity with serum are made, thereby thinning the thick pus and allowing a more thorough cleansing. The abscess cavity is then injected with clean serum—a quantity amounting to from one-third to one-half as much as the aspirated pus. The point of puncture is then covered with gauze and adhesive plaster. Healing proceeds rapidly and definitely. In infiltrating suppurations or more diffuse inflammations, e. g., felon, phlegmon, carbuncle, diffuse phlegmonous mastitis, etc. (16 cases), healing can be accomplished only after the infiltrating process has gone on to a well circumscribed abscess. Otherwise, the only value of the method in these cases lies in the fact that wherever the serum comes in intimate contact with the wound, the secretion ceases, the exudate and necrotic tissue become separated within a few days, and the wound soon becomes clean. In bone suppurations (4 cases) the laying open of the bone focus followed by many weeks of progressive treatment with serum irrigations, serum packs, or serum injections resulted in nothing more than a cleansing of the soft parts of the wound. Bone fistulas (5 cases) are subject to the same criticism as bone suppurations. Fistulæ of the soft parts (7 cases) especially when they were large and superficial and therefore suitable for tamponade, soon showed a narrowing, a diminution of their discharge and a filling of the fistula with clean granulations.—*Jour. A. M. A.*

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY A. LEIGHT MONROE,

Miami, Florida.

BROMIUM, 1X-2X. WHOOPING COUGH. It appears that few, if any, physicians recognize the extraordinary value of this remedy in the treatment of this intractable affection. This fact appears the more singular as its pathogenesis manifestly indicates its use in spasmodic affections of the bronchial portion of the respiratory tract. This is probably due, in a large measure, to the worthlessness of the remedy in stock because of its instability and tendency to rapid deterioration. The reliability of the drug must be insisted upon absolutely if its use is not to prove disappointing. Have it fresh and properly prepared and in the lower dilution, the 1x and 2x being found most effective by me.

In some cases the beneficent effect is promptly apparent. More often there can be observed no appreciable effect of the remedy until it has been taken persistently for ten days or two weeks, then there results so complete and sudden an amelioration of the disease as to be, in some cases, almost startling—so much so that you will at times doubt your diagnosis of the condition. It is then that the paroxysms of coughing completely disappear or become infrequent and less spasmodic, with a tendency to disappear within a very short period of time. With the continued administration of the remedy at less frequent intervals, the few tardy symptoms clear away and the little sufferer remains well.

The indiscriminate use of the remedy necessarily means some failures, but the dearth of characteristic indications or symptoms in the early stages of the disease has led me to an almost routine use of the remedy as soon as I am fairly sure of my diagnosis.

The only special indications that can be given you are, the aggravation late in the day and early part of the night, and also from the warm air of a poorly ventilated room.

In association with bromine, belladonna, and ipecac, are valuable intercurrents; belladonna for dry cough with the appearance of fever, and ipecac, where there are excessive quantities of mucus with a tendency to vomit—both conditions are from bronchial inflammation resulting from taking cold.

An effective way to administer the remedy is to add 2 to 3 drachms of the 1x and 2x dilutions to 6 oz. of simple syrup—giving a teaspoonful from one to two hours.—*The Clinique. British Hom. Review*, Jan., 1910.

TREATMENT OF ERYSIPELAS BY CARBOLIC ACID AND ALCOHOL.—Aspinwall Judd, of New York (*Medical Record*, February 13, 1909), recommends

the use of strong carbolic acid painted on the surface in case of erysipelas until the surface is whitened, and then followed by swabbing of alcohol. The treatment must go a half-inch beyond the border of the eruption to destroy all the germs. The unbearable itching, burning and throbbing are relieved at once, fever soon falls, and general symptoms are relieved. The author has treated successfully 67 cases, and 5 cases in which it failed. No scarring results. The superficial layers of the skin come off as in mild sunburn and the complexion is improved.—*The Clinique*, Jan., 1910.

THE HYGIENE OF THE AIR PASSAGES.—Adoniram B. Judson, of New York, draws attention to the fact that coughing, sneezing and blowing the nose do not relieve the subject, but that by increasing the congestion and irritation of the air passages they increase the condition which the patient seeks to relieve. Inflammation and secretion are increased by the exertion of coughing, which brings into play all the strong expiratory muscles of the chest and abdomen. The habit of coughing and blowing the nose should be controlled, and suffering will thus be lessened for the subject.—*Medical Record*. (*Med. and Surg. Reporter*, Jan., 1910.)

ARSENICUM.—No one familiar with the Homœopathic Materia Medica has failed to become acquainted with the action of this common and powerful poison capable of doing much harm, and for that reason capable of doing an equal amount of good. Perhaps I have not used it as frequently as many others, but I could hardly fill its place were I unable to secure it.

The anemia of arsenicum is one of its most characteristic indications; pallor, with œdema of the extremities and of the face, added to the pearly whiteness of the sclerotic coat of the eye, are symptoms common to this remedy. We read in its pathogenesis of the extreme prostration; the frequent pulse—generally feeble and sometimes intermittent, with a dyspnoea which comes with such a state of prostration, and it is for these symptoms we find it frequently indicated.

I have found it an exceedingly valuable remedy in malarial fever. It follows well after the large doses of sulphate of quinia usually taken by many people in a malarious district before they consult a physician. It is not indicated in cases where the fever is distinctly intermittent, but rather in those where the fever is irregular, generally aggravated at night, approaching a remittent type, and some of them bordering on a continued form. There is no marked perspiration, although it is not entirely absent. The liver and spleen are enlarged, especially the latter. There is extreme restlessness, the patient being unable to sleep except for a short period of time. As a rule it is more valuable in old and feeble individuals.

It differs from eupatorium perfoliatum, for with that remedy we get a paroxysm late in the forenoon, and there are severe pains in the back and extremities.

With nux vomica we get a paroxysm sometime in the forenoon, or it may be anticipating—that is—coming a little earlier each day, with great prostration following immediately after the chill.

At the climacteric it is well indicated for the so-called "hot flashes," when the face is frequently flushed, and there is an accompanying frontal headache in many instances. I have cured many cases at such an age with their remedy.

The burning pain of arsenicum is known the world over, and as one of the old authorities states—the more the burning the more is arsenicum indicated.

In asthma it is an exceedingly valuable remedy, the person being unable to lie down with comfort, and there is the irregular fever which has been referred to before.

The catarrhal symptoms of arsenicum are not as well marked in asthma as in the case with tartar emetic, or sulphur. With tartar emetic there is often in connection with the asthma a capillary bronchitis, with an accumulation in the tubes, causing a fine, moist rale, and the patient is unable to rid himself of this accumulation, and in consequence we frequently get a cyanotic condition. With sulphur the paroxysms of dyspnoea are more regular, but they, too, come on during the night, usually soon after twelve o'clock. The restlessness of arsenicum is quite characteristic, and it is only for a short time that the patient is able to remain quiet. His sleep is broken by dreams, and he does not feel rested on rising in the morning.

It is not indicated for constipation, but for diarrhoea it often proves valuable. Such a diarrhoea is profuse and watery, similar to that of cholera morbus, and resembling very closely that of Veratrum Album, but the pains are not as violent, neither are there the same cramps of the extremities as we get with Veratrum Album.

Croton Tig. and Aloes have also a watery diarrhoea. The symptoms of Croton are aggravated after each meal, while with aloes the diarrhoea is aggravated from 5 to 10 a. m. With arsenicum the diarrhoea is, like its other symptoms, worse at night.—G. I. Jones, *Med. and Surg. Reporter*, Jan., 1910.

AESCULUS HIPPOCASTANUM.—By Dr. H. C. Allen. *Horse Chestnut. Sapindaceae.* For persons with hemorrhoidal tendencies, and who suffer with gastric, bilious or catarrhal troubles.

Fullness in various parts, as from an undue amount of blood; heart, lungs, stomach, brain, pelvis, skin.

Venous congestion, especially portal and hemorrhoidal.

Despondent, gloomy; very irritable; loses temper easily and gains control slowly; *miserably cross* (Cham.)

Mucous membranes of mouth, throat, rectum are swollen, burn, feel dry and raw.

Coryza; thin watery, burning; rawness and sensitive to inhaled cold air.

Follicular pharyngitis; violent burning, raw sensation in throat; dryness and roughness of throat.

Frequent inclination to swallow, with burning, pricking, stinging and dry constricted fauces (*Apis. Bell.*)

Rectum: *dryness and heat of*; feels as if *full of small sticks*; knife-like pains shoot up the rectum (*Ign., Sulph.*); hemorrhoids blind, painful, burning, purplish; rarely bleeding.

Rectum sore, with fulness, burning and itching (*Sulph.*).

Constipation: hard, dry stool, difficult to pass; with dryness and heat of rectum; *severe lumbo-sacral backache*.

Stool followed by *fullness of rectum* and *intense pain in anus* for hours (*Aloe, Ign., Mur. ac., Sulph.*).

Prolapsus uteri and acrid, dark leucorrhea, with lumbo-sacral backache and great fatigue from walking.

Severe dull backache in lumbo-sacral articulation; more or less constant; affecting sacrum and hips.

Back "gives out;" during pregnancy, prolapsus, leucorrhea; when walking or stooping; must sit or lie down.

Sensation of heaviness and lameness in back.

Paralytic feeling in arms, legs and spine.

RELATION.—Similar to: *Aloe*, *Coll.*, *Ign.*, *Mur. ac.*, *Nux*, *Sulph.*, in hemorrhoids.

After *Coll.* has improved piles, *Aesc.* often cures.

Useful after *Nux* and *Sulph.* had improved but failed to cure piles.

AGGRAVATION.—Motion; backache and soreness, by walking and stooping; inhaling cold air.

(Use 3 d potency.)—*Med. and Surgical Reporter*, Jan., 1910.

THE CURE OF A COLD.—There is nothing that so exposes the helplessness of modern medical treatment as its utter inability to cure this commonest and most provoking of minor ailments. Mr. Shackleton, of South Pole fame, in his address to students of the Middlesex Hospital, on October 1, stated that in the Antarctic regions a cold was quickly dissipated by spending a few hours in the night air outside the tents of the expedition. The *Bacillus Catarrhalis* cannot stand a temperature much below zero, and is rapidly killed by such exposure. This fact explains the common observation that nasal catarrhs are rare during a period of prolonged frost, but when the thaw comes they at once claim many victims. Mr. Shackleton's treatment has obvious disadvantages, but we presume that if the nose gets frostbitten during the cure, so much the worse for the bacilli. How would a few hours' sojourn in a cold storage depot answer as a cure? We commend the suggestion to our allopathic brethren, as a means by which they may achieve that success in the treatment of this commonest of ills, which their idea of drug usage otherwise denies them. Possibly, however, they might object that the method savoured so much of homœopathy that its use would be incompatible with their professional dignity. Perhaps so; still this admirable quality must have suffered severely by the remarks of a few of the daily papers, who, commenting on Mr. Shackleton's address, were distinctly sarcastic to our noble profession for their ill success in common cold-curing. It is high time that some fresh treatment was attempted.

To those who have learned the value of remedies prescribed according to the directions of Hahnemann, the cure of an ordinary cold presents few difficulties. In fact, we know of no simple ailment by the prompt and easy cure of which more credit can be, and has been, obtained for homœopathy. Not a few recruits to our cause have been converted by this means. We recall one notable instance of a wealthy stockbroker, an exceptionally shrewd and clear-headed man, who having been a martyr for many winters to severe nasal catarrhs, which many doctors had failed to relieve, was so impressed by the speedy cure effected by some tasteless drops in a tumbler of water, that he enquired further into the subject, and becoming an enthusiastic homœopath, remained so to the day of his death and won many of his friends to the cause. Not only amongst laymen has this

occurred but even members of the medical profession have been similarly influenced. A colleague, who is now well known in homœopathic circles, informed us that his conversion dated from the cure of a severe cold. It appears that he started for a week's holiday, many years ago, the victim of a severe catarrh, to which he was occasionally subject. Staying with friends, his hostess was a homœopath, and persuaded him to take a tasteless powder, which was, in fact, *mercurius biniodatus* 12x. Treating the matter as a joke, and entirely sceptical of any result, to please the lady he followed her directions, when to his surprise the trouble vanished in a few hours. Instead of evading the fact in alarm, as many a weaker man has done, he had sufficient character and decision to investigate the matter further, and entered upon the study of homœopathy with honesty and purpose. Then followed the inevitable result that a new recruit was added to our ranks, and we are happy to know that he is doing good work in our midst to the present day.

At this season of the year, when common colds are multiplying around us, it may not be out of place to draw attention to a few remedies which are of very frequent value and are, perhaps, not quite so well known as they deserve to be. Whilst it is as essential in the cure of colds, as of all other maladies, that the case be individualized and each treated according to its peculiar symptoms, at certain times certain remedies seem to be specific to the type of colds common at different seasons. Excluding the remedies *arsenicum*, *nux*, *mercurius solubilis*, which are commonly used by us all, we may draw attention to *merc. biniodatus* in the early stages of colds, especially in children. Amongst our patients we have parents who keep this remedy by them, and effectively dose their children at the first onset of symptoms. After the first stage is passed, and especially in adults and those in whom a cold is liable to result in a bronchial cough, there is no drug we prescribe with such confidence as *antimonium tartaricum*. This remedy covers a wide field of cases, and is probably more generally useful than any other, and is far less often used than it might be. Next, we would remind our readers of *allium cepa*, which will often cure promptly when other drugs have failed. It is not necessary for the eyes to be affected to ensure its efficacy. Lastly, we would mention *kali iodide* which is very often of high value, especially in adults of a gouty type or liable to asthmatic attacks. But in all cases the symptoms should be carefully compared with those given in our text-books as peculiar to each drug. Routine prescribing is always to be avoided.—*Med. and Surg. Reporter*, Jan., 1910.

FOREIGN LITERATURE

CONDUCTED BY E. FORNIAS, M. D.

DISORDERS OF THE CONSCIOUSNESS, OF THE PERSONALITY AND OF THE WILL IN THE OBSESSIONS.—Consciousness is the knowledge which the mind has of its own acts and feelings; it is an interior sentiment. "It is a mode of general sensibility which allows us to judge of our own existence, or, by means of which we are able to conclude as to our good and bad actions."—*Robin*. It has also been described "as the knowledge of one self or the intimate knowledge of the good and bad of our own acts, before or after they were committed."—*Grim*.

Personality is the consciousness we have of our own individuality, as far as it constitutes a harmonious whole, both organic and functional. It is the difference, strictly characteristic, which makes up each individual and which distinguishes or singularizes one from another. It is the character or quality of what is personal. It is that which constitutes distinction of person. Individuality. Distinct existence.

Will is the power of choosing or determining; or the faculty of volition. Internal power by means of which man determines to act or not to act. Choice or determination. The faculty of preferring or selecting.

Obsession is essentially based upon an impotence of the will with preservation of the intelligence, properly so called, it shows itself in fixed ideas or besetments, active or negative impulses, all with full consciousness and reasoning power, but irresistible and anxious. It includes consequently a host of conditions scattered here and there in the nosology under myriad names unnecessary to mention here.

Regis in the 3rd edition of his "*Precis de Psychiatrie*," 1906, describes obsession, as follows: "*Obsession* is a morbid syndrome, characterized by an involuntary and anxious appearance in the consciousness of feeling, or of parasitic thoughts, with a tendency to impose themselves on the Ego, unfolding about him, notwithstanding his efforts to repel them, thus creating a variety of psychic dissociations, whose last term is the *conscious duplication of the personality*."

Obsession, being, as Morel was the first to find, and we think it is, a thoroughly *emotive pathological state*, we may well allow it two types or varieties, for the anxiety which is its base becomes especially manifest, either under the form of *fear*, or by an idea. The first type is the *phobic obsession*, or phobia, the second, *idiative obsession* or obsession proper.

One of the characteristics of *obsession*, says Seglas, is to impose itself by force upon the individual, by a sort of sundering of the will. From this point of view, says Regis, it is more than probable that *obsession* is not only a disorder of *emotivity*, but also of the will, and Arnaud is right in insisting in this respect.

This *character of obsession* has as a necessary consequence, to create, side by side of the chief mental synthesis, one or more automatic secondary

combinations, in one word, a dissociation or splitting of the individual's personality, who very often has the feeling or the consciousness of this duplication of self, and interprets it by varied and singular expressions.—*P. Janet and Seglas.*

From this state we naturally have, as a result, not only an intellectual trouble, which may reach in acute crisis to the confusion of ideation and consciousness, but also a revolt of the *will* against the parasitical idea, and an effort, more or less accentuated on its part, to repel this idea. There is in all *obsessions* a conflict between two opposite forces. Unfortunately the clearest result of this struggle consists in concentrating more and more the attention on the hunted idea, rendering it more sharp and distinct in the consciousness (*Seglas*). Hence, we have an increase of the anxiety, or, better, an addition to the primitive anxiety, origin itself of the obsession, of a secondary or concomitant apprehension or disquiet, the result of the painful conflict between the will and the idea.

The *means of defence of the obseded* have been attentively described by Regis. According to this authority, any *obseding idea* naturally tends to express itself by motion, that is by acts, and then we are dealing with an *impulsive obsession*, which should be studied under the head of *impulsions* (a morbid impulse or irresistible tendency to perform an action). As to the *will* it resists as well as it can, sometimes directly, at other times by a series of indirect processes, which Regis has studied with his disciple Bellet, under the name "*means of defence of the obseded*," divided in various classes, according as they have for an end: 1, to prevent the obseding attack; 2, to control the attacks when developing; 3, to attenuate, or conceal the emotive effects. Regis confines himself to point out, without entering into detail, some of the most frequent and most typical means of the last class. The *obseded in doubt* pay twice for an article, if they cannot become assured whether it has been paid or not. *Many obseded of contamination* constantly wear gloves and change them every day, they are unceasingly preoccupied with their garments and underwear; watch with great solicitude, during the night, the covers artistically laid on the back of the chair on which they rest, which must be very clean indeed, and they wash their hands perpetually. *Washing of the hands*, plays, as we all know, an important role with the obseded, especially in those affected with anxious fear, not only of material dirt, but of moral stain, where it interferes as an act of symbolic purification, in the same manner as the ablutions of religious rites. Finally, let us mention, the more or less frequent repetition of acts of this class of patients, who frequently do recommence an act, until certain that its execution, according to their views, is perfect, or contemporaneous with a salutary, favorable idea, and not with a bad, grievous one.

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HAHNEMANN AS A HYGIENIST.

BY

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(Read before the Homœopathic Medical Society of the County of Philadelphia.)

WHEN your president asked me to read a paper before the Homœopathic Medical Society of the County of Philadelphia, it seemed my imperative duty to accept, and after some consideration, I selected for a subject "Hahnemann as a Hygienist." Although this title bears no direct relationship to homœopathy, I trust it will interest you, chiefly because it will show Hahnemann from a point of view seldom considered by his followers. For, often do we look upon Hahnemann as being only the founder of homœopathy, without regard to his brilliant achievements in other lines. What a wealth of knowledge is displayed in his "Lesser Writings," and especially in his "Friend of Health," of which I have made extensive use in the preparation of this paper.

Two years ago the Homœopathic Society of the Kingdom of Wurttemberg celebrated its 40th anniversary in the presence of Hahnemann's only grandson, Dr. S. Hahnemann, of Ventnor, who, in spite of his eighty-one years, had traveled all the way from the Isle of Wight to Stuttgart, to attend this meeting of the Society, of which he is an honorary member. The committee had asked me to prepare a speech for the occasion, one perhaps, in which would clearly be proven, that Hahnemann was not only a scientist, but also a man of common sense, a physician in fact, who was far ahead of his time.

In order to prove this conclusively, I could not find a better subject than the one which I intend to present to-night.

Moreover, I knew that I was able to bring before my countrymen quite a number of interesting facts about Hahnemann's hygienic writings, that had neither been known to the profession nor to the laity.

In preparing a biography of Hahnemann for publication, I searched for years for Hahnemann's "Friend of Health"; but not even the most complete of our German homœopathic libraries, that of the Homœopathic Central Union of Leipsic, was in the possession of both parts of this unique little book. At last I succeeded in getting hold of a complete copy, and was very much delighted when I became acquainted with the tremendous amount of knowledge on hygiene contained therein.

I was just as much surprised, when looking through an English edition of Hahnemann's "Lesser Writings" a few weeks ago, to find that both parts of the "Friend of Health" had been translated into English and had been inserted into the English edition of the "Lesser Writings." In spite of this fact, little seems to be known about Hahnemann's hygienic essays in particular and about his "Lesser Writings" in general. I do not know why the homœopathic profession of America does not take more interest in Hahnemann's "Lesser Writings," unless it should be that they do not think it worth while to read "*lesser*" writings of our master. But, gentlemen, let me tell you, that from a scientific standpoint these "Lesser Writings" would not be regarded as "*lesser*" did they stand alone; they can be regarded only as "*lesser*" to his remarkable therapeutic discovery. His mental acumen and foresight was in no wise "*lesser*" when he wrote upon these collateral subjects.

My paper was very favorably received and the Society had several thousand copies printed and sent to the old school physicians of southern Germany, as well as to the professors of the Universities of Tuebingen and Heidelberg.

I, therefore, considered this paper worth translating into English, and am presenting it to you to-night. If interest in Hahnemann's "Lesser Writings" will thereby be awakened, I shall feel highly gratified.

The old proverb, "An ounce of prevention is better than a pound of cure," expresses the basic idea of that branch of

medical science which we call hygiene, sanitation or preventive medicine. Hygiene, however, is not only direct prevention of disease. It includes any and everything which increases our resistance or improves our vitality. From this point of view it is just as old as humanity itself. Efforts to combat conditions detrimental to physical and mental well-being were made by the most ancient people. In fact, some of the nations of antiquity attained remarkable development in public hygiene. The habits and customs of the *ancient Egyptians* permit the deduction that they had quite a number of sanitary institutions, and it is highly probable that their physical perfection extolled by Heroditus was largely due to these. The *Hebrews* likewise had practices and regulations to prevent the spread of infectious diseases. In addition the rules laid down by Moses showed that they had a good conception of the hygienic needs of their times. The *Greeks* and *Romans*, however, made the greatest advances in this direction. It is known that the water supply and the arrangements for the disposal of sewage in Athens were something wonderful. The Greeks paid particular attention to physical culture. They went through regular courses of training, using gymnastics and baths, so as to not only keep themselves healthy, but to symmetrically develop their bodies into the forms perpetuated by their artists, and to fit themselves for public life and make themselves invincible on the battlefield. With the Romans it became second nature to institute sanitation wherever they went. Their sewage systems enabled them to keep their houses and streets clean, and numerous public baths did similar service for their bodies. Some of the stupendous works of the old Romans even to-day excite our highest admiration.

With the decay and fall of the Roman Empire, interest in and understanding of public and private hygiene lessened and soon almost vanished in the occident, and the Dark Ages set in. The hygienic teachings of Hippocrates and his followers were forgotten, and ignorance and barbarism replaced the Greek and Roman culture. The leading physicians paid little attention to hygienic problems, and almost no interest was taken in public or private sanitation. Epidemics of small-pox, cholera, and the plague killed millions of people, but no one ventured to combat these dread enemies. The devastating epidemics were looked upon as the revenge of God which was not to be resisted. The only redress they knew was at the hands of the church. Not

until the thirteenth century did the prophylactic idea again appear. The importance of cleanliness was then urged, public baths were erected, and streets and public places were cleaned. They also began to take some interest in the preparation of food-stuffs. However, time and circumstances were as yet unfavorable for the development of a rational system of hygiene. Not until the 18th or 19th century did the sanitary movement get well under way. Even then there was so much opposition that this branch of medical science can be said to be a distinctly modern achievement. The honor of putting hygiene on a practical and scientific basis belongs to the late Professor Max von Pettenkofer, of Munich. He aroused interest in public hygiene and as a result of his labors we have the science of hygiene and its practical counterpart in our modern systems of sanitation and prophylaxis of disease.

Now, let us inquire into the conditions at the time when *Hahnemann* began his medical and literary labors. What was his position regarding public and private hygiene?

A perusal of works on therapeutics appearing up to the close of the 18th century shows that hygiene was given a very insignificant place. Many writers on therapeutics make no mention of hygienic measures, others do so very infrequently. Apparently hygiene was then not considered an essential part of therapeutics. *Hufelands Journal*, which as we know contained the contributions of the foremost physicians of that time, offered so little on the subject of hygiene that an allopathic physician in 1828 called the attention of his school to the fact that they were far behind Hahnemann in this branch. Professor Max von Pettenkofer criticises severely the then existing knowledge of hygiene, saying: "The hygienic teachings of Hufeland's time do not hold good to-day, their foundations having been washed away by the flood of new physiologic data, leaving almost nothing of the old structure intact."

Comparing Hahnemann's writings on therapeutics with those of his contemporaries, we are much surprised at the thoroughness with which he discusses questions pertaining to hygiene. Even when treating of external diseases, when hygienic provisions would least be expected, he gives careful and thorough directions regarding diet, exercise, bathing, etc. His first medical book, "Directions for Curing Radically Old Sores and Indolent Ulcers," which was published in 1784, gives much and excellent hygienic advice. This little volume, comprising

scarcely 200 pages, contains more useful information on hygiene than the entire first thirty volumes of Hufeland's celebrated "Journal der Heilkunde." Hahnemann's most important work on hygiene, however, is contained in parts I and II of his "Friend of Health," appearing in 1792 and 1795, respectively. In this little book which was intended for the general public, Hahnemann discusses the various phases of public and private hygiene with wonderful clearness and accuracy. He lays down the hygienic rules appearing most important to him, without introducing technicalities. Notwithstanding the revolutionizing advances in physiology and pathology many of Hahnemann's essay on hygiene retain their full value to-day. Therefore, we must not be astonished at the lack of understanding on the part of his contemporaries, for he was a century ahead of his time.

The German people of Hahnemann's time were not yet educated up to a proper understanding of a rational hygiene. Numerous superstitions still lingered among the masses. Instead of ascribing various disease to lack of hygiene, they accused some one of having exercised witchcraft. Hahnemann energetically opposed such superstition, saying (a nursery, p. 181), "What harm could the poor innocent child have done to the bad people? Where are these bad people that possess the power by a few words to make ill a healthy child fed moderately on wholesome food and strengthened by cleanliness and exercise in the open air?"

One can see how anxious Hahnemann was to secure a more rational public opinion, and how important he deemed the general knowledge of hygiene, from the following quotation from the preface to the "Friend of Health": "My mission does not permit me to point out the means of ennobling the mind. It behooves me only to preach the greatest of corporeal blessings, namely, health, which scarcely any take the trouble to seek after and few know how to value until it is lost." And, a few pages further on, he says: "To take *ourselves* to task about pernicious habits, to study our own system, to follow the regimen most appropriate for our own constitution, and heroically to deny ourselves everything that has a tendency to undermine our own health, or that may already have done so, to bestow a thought upon all this, is held to be puerile, old fashioned and vulgar." "Oh! that I were so fortunate as to be able to contribute something to the happiness of mankind. If

they would but listen to the voice of a friend. In a few years, nay days, we have reached the termination of our earthly life; would that I could now and then prolong it for but a few hours. Would that I could improve it, were it only in trivial things."

With your leave, we will now take up separately Hahnemann's views on hygiene, beginning with that absolutely essential thing, *fresh air*. In his maiden effort, the aforementioned "Directions for Curing Radically Old Sores and Indolent Ulcers," he strongly advocates the open air treatment. He also emphasizes the beneficial effects of change of climate and sea voyages. These things were hardly mentioned by other medical writers of that time. On page 12 he speaks of a patient suffering with ulcers, "the malignancy of which was favored by the warm, damp atmosphere and the air of swamps about the lower end of the town of Hermaundstadt where she lived." He several times refers to the baneful effects of damp air. For instance, he says: "Even if the composition of the air is normal, the addition of foreign substances, especially moisture may render it injurious." On page 94 of the same work he speaks in convincing language of the beneficial effects of remaining in the open air as much as possible: "Where is the remedy that can more certainly remove the decomposing ferment in our blood vessels that always tends to destroy our machine than pure air? It is only in the pure air that we feel refreshed by breathing; in cellars and close rooms full of living creatures we become weak, faint and die, often in a few hours, if the air is much spoilt by the breath of many persons. These different effects of the air we breathe convince us that life and health are not to be expected without pure air."

In a special article on "Things That Spoil the Air," he thoroughly discusses conditions which injuriously affect the air in our homes and undermine our health. In speaking of the ventilation of our living rooms, he says: "We should rather seek to save wood by using well-constructed stoves, than by stopping up every hole and cranny in the doors and windows, exclude every breath of air, as is done by many persons of slender and of moderate means. Such persons must be ignorant of the incalculable value of air, who paste up with paper every chink and hole, and even hang up cloths before their doors, and thus retain all the unwholesome exhalations from the pores of the skin and from the lungs in their small rooms, so as

to respire, instead of life and health, disease and death. I have seen melancholy examples of this nature, and I fear that my warning will have some difficulty in penetrating to the miserable cellars they have themselves selected."

He insists that in the hospital treatment of epidemic diseases, all the windows in the sick rooms be opened in the afternoon and kept open for at least an hour, so as to permit of the free entrance of fresh air. To-day this injunction sounds as a matter of course, but if we look upon the then prevailing ideas on treatment of epidemic diseases, we find that the exact opposite was done. For instance, patients with scarlatina were kept in overheated rooms, and almost smothered with heavy featherbeds. Every avenue for entrance of fresh air was closed, and despite their prayers for water, all liquids were interdicted.

Hahnemann advocated large airy rooms for the accommodation of the sick. He insisted that the prisons should likewise have sufficient air capacity. "It is great cruelty to shut up many prisoners together without allowing at least 500 cubic feet of air space for each. If this be not allowed, the better ones among the prisoners are exposed to much annoyance by the bad behaviour of the worse ones."

"Odors of all kinds should be kept from the living and sleeping rooms. Those who are particular ought not to use the room in which food has been served and eaten, until thorough ventilation has removed the vapors and odors of cooking."

. . . . "Generally, substances which give off much odor markedly spoil the air."

Hahnemann attaches great value to regular daily walks in the open air: "Next to nourishment, exercise is what is most important for the animal machine. By it the clock-work is wound up. These delicate creatures should not be confined to needle work, nor allowed to loiter over the toilet table, to play cards, to pay tedious visits or to read enervating books, whereby they would be reduced colorless plants grown in a cellar. Exercise and wholesome air alone suffice to determine all the parts of our body to their proper places, compel the excretory organs to throw off their accumulated moisture, give strength to the muscles, communicate to the blood its highest degree of redness, attenuate the humors, so that they can readily penetrate the remotest capillary vessels, strengthen the heart's beats, establish healthy digestion. They are the best

means for obtaining repose and sleep, whereby refreshment and renewal of the vital spirits are secured."

"Strengthening diet, wholesome air and exercise, together with diversion of the mind, are indispensable and every one should know their power and how to employ them. Nourishment suited to the body in appropriate quantity is the only thing required to ensure healthy digestion and to eliminate the bad juices from the *primae viae*. Exercise promotes the appetite, strengthens the digestion, and better than all purgatives, expels the excess of evil humors by the natural outlets of the body. Every movement of the limbs conduces to the strengthening of the circulation of the blood and to the completeness of the assimilation of the nutritive fluids—there can be no health without exercise."

This shows that Hahnemann was very strongly in favor of fresh air, for he does not tire of recommending it in disease and in health. He likewise laid great stress on the *care of the skin*. In addition to painstaking cleanliness he demands a certain amount of *hardening*, and censures the effeminating practice of pampering and overprotecting the children which even at that time was not restricted to the rich. But he insists upon moderation in athletics and other hardening processes, because "Nature does nothing without preparation; all her operations are performed gradually, and the more complex and artistic the work is that she performs, so much the more cautiously and gradually does she do it. She never goes from summer to winter without interposing the transition period of autumn." "Let us imitate nature—let us never make January to follow close upon June, nor July upon January, if we do not wish our tender plants to be blasted and withered by both of these extremes." "It is incredible what man can endure if he be gradually habituated to it."

By hardening, Hahnemann means not only inuring to cold but also to other influences, "Would it not be just as delicate, to be unable to endure heat? Persons who can not bear the heat of the sun or of very warm rooms, are liable to the most serious, even fatal accidents; why are they not accustomed to this also?"

In several essays Hahnemann proves himself decidedly opposed to *corsets*. This is the more noteworthy when one realizes that the bad effects of tight lacing have only been fully realized within the last decades. Only within the last few years

has a veritable war been declared on the corset in Germany. In his "Directions for Curing Radically Old Sores and Indolent Ulcers" he says that varicose veins are caused by sedentary habits, tight lacing and circular garters. Speaking of chlorosis he says on page 77: "The modern dress of our women is a very frequent cause of amenorrhoea; this being due to compression of the abdominal and pelvic vessels." In his "Manual for Mothers," Hahnemann speaks so emphatically against the corset that one sees he was well aware of the evil effects of tight-lacing on the various organs. On another occasion he says, regarding the inane feminine fashions: "Amid how many attacks of faintness will not yon lady express her thanks to her host, after having worked away for hours at her toilette, preparing for the festivities, in the endeavor to diminish by one-third the capacity of her chest by means of a whalebone apparatus, until drawn in so tightly as to look like a wasp, she could scarcely take in air enough to support her life in a pure atmosphere!"

We will next take up Hahnemann's views regarding *diet*. This branch of hygiene was likewise miserably neglected for centuries. Even during Hahnemann's time many medical books made no mention of dietetics. The majority of writers apparently considered it of no consequence, and only a few saw the real value of diet in the prevention and treatment of disease. On the other hand, many of Hahnemann's contemporaries, among them Dr. Brown, made most absurd dietetic regulations which are contrary to common sense as well as incompatible with modern scientific views. Even to-day we pay too little attention to diet. One of the most prominent and gifted German clinicians of our day says that our younger physicians are not sufficiently conversant with dietetic therapeutics, and that the recent graduates as a rule carry practically nothing on this subject from the lecture room into their daily practice.

Is it not to be wondered at, that an 18th century physician should interest himself so deeply and do so much in a branch of therapeutics, the details of which have not yet been worked out scientifically? Hahnemann's dicta concerning a rational way of living showed above all else his practical mind and common sense. Many of his dietetic regulations, especially those for febrile cases are in strict accord with modern ideas. As early as 1784 in the previously quoted treatise on indolent

ulcers we find interspersed minute instructions regarding the dietary.

He lays particular stress on the necessity for individualizing. His disapproval of routine treatment is everywhere evident. In a dietetic dialogue, "chiefly about the instinct of the stomach," he writes: "Is not everyone's stomach as peculiar as every person's foot, which the shoe of another will not and cannot fit?" To the question: "And what then is your infallible guide to the only saving system of dietetics?" He replies: "Moderation and attention to what best suits our individual constitution in every condition. I will allow a finger to be cut off, if this be not the natural religion of the stomach and the only infallible dietetic rule for every one." He considers moderation of the highest importance, saying: "Moderation, strict moderation, that is not to be bribed by a pampered, corrupt palate, is a sublime corporeal virtue, without which we cannot become healthy nor happy."

Later, Hahnemann laid down special dietetic rules for acute and chronic diseases which up to a certain degree became a part of the homœopathic treatment of chronic ailments. He laid such stress on strict adherence to a definite sick diet, that certain of his enemies ascribed his success with homœopathic treatment exclusively to this cause. In reply to these, Hahnemann said: "Strict diet is not the curative agent in the treatment of chronic diseases. The cure depends chiefly upon the medical treatment. This is proved by the fact, that many patients have followed, for years, the strictest diet without being able to obtain relief. By wisely yielding to circumstances the physician effects the cure more certainly and more perfectly than by obstinately insisting upon a mode of life which it is impossible for the patient to follow. If their strength permit, the journeyman ought to continue his labor, the artisan to work at his trade, the farmer attend to his business in the fields, the housekeeper to her domestic concern; only that which is generally injurious to health, ought to be carefully avoided."

The fact that there is to-day practically no difference between allopathic and homœopathic therapeutics as regards diet is largely due to the fact that hygiene and dietetics have been meanwhile given attention by the old school. Dr. Osler says: "There probably has never been a time in the history of the profession when the value of diet in the prevention and cure of disease was more fully recognized." He frankly gives as the

main contributing factor in bringing about the present reliance on hygienic measures rather than drugs, "the valuable lesson of homœopathy, and the skepticism of Paris and Vienna physicians."

Hahnemann has often been charged with being too narrow in his dietetic views. This may in some respects be true, as his sick dietary was calculated to permit of no interference with the dynamic action of the similimum by extraneous substances of possible drug power. Hahnemann leaves no room for doubt, as he states in Sec. 259 of the *Organon*: "The minuteness of the dose required in homœopathic practice makes it necessary that every other kind of medicinal influence that might cause disturbance should be avoided in the *diet and regimen* of patients, in order that the highly rarified dose may not be counteracted, overpowered, or disturbed by extraneous medicinal influences." He appends the following beautifully metaphorical footnote to this paragraph: "The distant and mellow tones of the flute which, in the silent hours of night, would melt a tender heart, and call forth celestial emotions and religious sentiments, are drowned by the discordant and tumultuous sounds of the busy day."

Anyone who is familiar with Hahnemann's writings must have concluded that the charge of narrowness regarding dietetics cannot be upheld. I should like to cite an instance in support of my claim. Undoubtedly the credit of first calling attention to the evil effects of coffee is due him. As a logical deduction, he forbid his patients to use this luxury, which he considered detrimental to health. Nevertheless, he points out in his "Chronic Diseases," that older patients who are accustomed to the regular use of coffee, should be advised to decrease their consumption of coffee while under homœopathic treatment rather than to discontinue it entirely.

The fundamental ideas of Hahnemann's dietary were first to conserve, as much as possible, the patient's energies, which would favor the re-action towards restoration of health, and second to interdict any substances which might have medicinal action and so interfere with the effect of the similimum. The details of diet for the individual case he left to the judgment of the attending physician, to be arranged to a certain extent, according to the desire of the patient.

Thus far we have considered what might be termed personal or private hygiene. Allow me next to familiarize you

with Hahnemann's views on what we will call *public hygiene*. The frequent occurrence of epidemics, which often carried away more than 50 per cent. of the inhabitants of cities and villages in wide stretches of the country, gave Hahnemann the impetus to thoroughly study the prophylaxis and treatment of the infectious diseases. He published the results of his investigations in three large essays, which admirably show his originality and clearness of perception. I am sorry that time does not permit my reading you all three essays. The subject is so thoroughly treated and the conclusions are in such perfect accord with modern ideas, that Hahnemann's work might well be used as the basis of the proposed law for the prevention and treatment of infectious diseases which is about to be formulated for the German Empire. This is the more noteworthy, as the prevention of epidemics is commonly considered an achievement of very recent years.

At the beginning of the nineteenth century, the causes of infectious diseases were entirely unknown; but even as early as 1792 Hahnemann expressed the conviction that they are contagious. He says: "Malignant fevers that spread among the people have usually, at all events often, a contagious character, notwithstanding that some of my colleagues have endeavored most learnedly to prove the contrary." On another occasion he speaks of the germs of infectious diseases as "animal poisons which are called epidemic miasms." In a pamphlet, published in 1837, Hahnemann expressed his view of the cause of Asiatic cholera more explicitly. While the celebrated Hufeland and his adherents ascribed this disease to *atmospheric* and *telluric causes*, Hahnemann remains firm in his conviction that cholera is a *contagious* disease and that the sick person is its chief propagator. He goes so far in his explanations as to say that the infecting substance is composed of probably millions of those miasmatic animated beings, which at first "developed on the broad marshy banks of the tepid Ganges. They always search out in preference the human being to his destruction, and attach themselves closely to him. When transferred to distant and even colder countries, these animated miasms become habituated to those regions also, without any diminution either of their unhappy fertility or their fatal destructiveness." He furthermore says: "Of these two opinions, one only can be the right one, and that which is found to be the correct one, will, like all truths, exercise a great influence on the welfare of mankind."

Since the discovery of the comma bacillus by Koch, we know how correct were Hahnemann's ideas as to the cause of cholera, and how entirely wrong the theories of so famous a physician as Hufeland.

The subject of *immunity* occupies a prominent place in Hahnemann's essays on the infectious diseases. He advises the physicians to make frequent but short visits to patients during the early stages of epidemic diseases, in order that they become slowly accustomed and non-susceptible to the contagion. And to quote his words: "I have observed that it is usually the *most compassionate, young* physicians who, in epidemic of this sort, are soonest carried off, when they neglect this insufficiently known precaution, perhaps from excessive philanthropy and anxiety about their patients." "Nurses who have before attended patients affected with the complaint are more secure from infection than are those who have not."

Upon the appearance of an infectious disease, Hahnemann insists on the immediate separation of the patient from the well. "For," says he, "it is the only means on which we can rely for checking epidemics in their incipency." Indeed he attaches such importance to the isolation of the very first cases of an epidemic, that he recommends that police assistance be called in to insure it. Says he: "If it be left to the individual to preserve himself from infection, even with the help of published advice, experience teaches us that all such recommendations do little good—and often, in spite of the best intentions, cannot be carried out. Just as the police, when a conflagration breaks out in a town, do not leave it to the caprice of the possessor of the house, to extinguish the fire in the way he thinks fit." "If ever the better part of the public ought anxiously to look to the authorities and to the police for protection, it is in the case of invasion of epidemics. If the protecting divinities of the fatherland do not stretch forth their powerful hands on that occasion, where else can we look for deliverance from the danger?" Hahnemann further recommends that extra rewards be paid the police for the detection of fresh cases, in order to make sure that all persons having an infectious disease be transferred to the specially provided hospital, because "Persons so dangerous to the community cease to belong to their friends. From the nature of their malady they come under the surveillance and care of the state, and they belong to the state until they are rendered innocuous."

This provision seems to be at first unnecessarily severe, almost cruel. Those of us who know by experience the indifference of the general public, can appreciate Hahnemann's point of view. This is in absolute accord with the teachings of our modern hygienists. In a lecture delivered in Stuttgart, November 22, 1906, Dr. Wolff, professor of hygiene at the University of Tuebingen, said: "To prevent the spread of infectious diseases the physician needs the co-operation of the legal and administrative authorities. It is impossible to overcome long-standing customs without assistance of law and police. For instance, if a well were contaminated by a poison or contained disease germs, it could not be closed without police interference on account of the ignorance of the masses. The object of this municipal control of hygiene is by no means to force a benefit on the ignorant. It is for the public welfare and for the benefit of the country at large. In order to protect the public, laws ought to be made to compel persons having or suspected of having certain infectious diseases to be treated at special hospitals, in order to nip epidemics in the bud." This, somewhat differently expressed, is exactly what Hahnemann recommended in 1792, and shows how far he was ahead of his times.

His "Plans for Eradicating Malignant Fevers," addressed as an open letter to the Minister of Police, comprised the following seven paragraphs:

(1) "Let a hospital or other public building without the gates of the town be prepared, solely for the reception of such patients; the court-yard must be surrounded by a stone or wooden fence, as high as a man.

(2) "From twenty to thirty cheap bedsteads are requisite, provided with straw mattresses and frieze coverings.

(3) "The male and female nurses—of whom there should be one for every four or five patients—must always remain in the house with their patients, and should never go outside the door. The food and medicines they require should be brought to them daily in the open court by persons who should immediately afterwards retire, so that the two parties will not approach within three paces of each other, and nothing should be brought from the house into the town.

(4) "In order to enforce this regulation, place a guard of two soldiers before the outer door, which they only are to

open, and command them to let no one but these persons and the physicians and surgeons in and out.

(5) "A small sentry-box formed of boards will protect them from the weather, outside of which should hang a linen, (or still better, an oil cloth) cloak for the physician and surgeon, which they should put on when they enter the house and lay aside on leaving it.

(6) "The medical officers should get a written notice of the mode in which it is desirable that they should protect themselves and others from infection, and the attendants of the sick should get instructions of a similar character.

(7) "All who fall ill of this malignant nervous fever in the town (the police officers should get a gratuity for all they detect) should be removed to the hospital by their friends in a covered sedan chair, kept for this purpose in the court-yard of the hospital, and there they should be taken care of and cured."

In a 14-page essay appearing in "The Friend of Health," Hahnemann gives more detailed directions, and in another essay comprising 33 pages, "Suggestions for the Prevention of Epidemics in General, Especially in Towns," follow. In both these essays he devotes much space to the destruction of disease germs, in other words, *disinfection*. In an earlier essay he demands that "those who have been engaged about such patients should certainly not approach others too nearly until they have changed the clothes they had on when near the patients, and the former should be hung up in an airy place, where no one should go near them, until we again need them to visit our patients. Next to the sick room, infection takes place most easily by means of such clothes, although the person who visits the patient may not have undergone any infection."

Clothing and linen of those who have come in contact with patients having infectious diseases should not be used "without being first immersed in hot water, preferable containing vinegar, and exposed to the open air or thoroughly subjected to the fumes of burning sulphur." Before discharging recovered patients from the hospital, they are to be thoroughly bathed in a special room and then given new clothes, while all the old clothes without exception are to be burned in the court-yard, in the presence of the physician. Old clothing should only be returned to the nurses at the end of the epidemic, however, not before. "All their articles of clothing and their linen

they have used during their residence in the hospital should be placed in an oven of about the temperature of a baker's oven after the bread has been removed (about 120 degrees Reaumur) [being 302 degrees Fahrenheit] and kept there for at least a quarter of an hour." In a footnote he adds: "The pestiferous miasmata which have been attached to clothes, linen, beds, etc., can, according to my observation, be expelled from such things and *destroyed* by no means more certainly than by a heat of upwards of 100 degrees Reaumur [100 degrees Reaumur equals 257 degrees Fahrenheit], the higher the temperature the better, even should the articles suffer a little from the effects." "All the other linen or woollen articles which have been used by the patients, the straw mattresses (after taking out the straw), the towels, sheets, etc., should likewise be exposed for fully an hour, to the same heat in the oven." Do these provisions not remind us of, and do they not clearly foreshadow our modern methods of sterilization?

"The excrements of the patients should be carried in well-covered vessels to the most distant part of the court or garden, and there emptied in such a way that the wind shall blow the exhalations from them away from the bearer. This should be done by those of the nurses who are most habituated to the contagious virus. The ordure should be placed upon a thick layer of sawdust and immediately covered with one or several bundles of lighted faggots or straw; whereupon the nurse should withdraw, and allow the excrement to be consumed by fire." "Whenever a patient has recovered or died, the wooden commode he has used must be burned in the open air, and the pot-de-chambre broken and the fragments thrown into the fire."

"After the epidemic has been subdued, the male attendants should not be dismissed until they have whitewashed the whole of the interior walls of the house, not only the sick ward, but every other room, and the females not until they have thoroughly scrubbed all the floors, all the wood-work and all the utensils. The sick ward should then be heated in the early morning as much as possible, at least up to 100 degrees Reaumur [270 degrees Fahrenheit], and after this heat has been kept up for two hours, all the windows should be opened and kept so till night."

In his "Suggestions for the Prevention of Epidemics in General, Especially in Towns," Hahnemann proves himself a

most excellent observer. Nothing escapes him; even trivial things are considered if they have any possible bearing on the spread of an epidemic. Rag pickers are not allowed to live anywhere except in isolated houses near the paper mills. Dealers in second-hand clothing should only be allowed to carry on their trade in open shops, and should be prohibited from selling their goods in houses under penalty of imprisonment. Prison cells should be cleansed and disinfected by heating to 120 degrees Reaumur [302 degrees Fahr.] after being vacated by the discharged prisoners. Prisoners of war should be housed in shacks outside town limits while in transit. Hahnemann furthermore speaks against acquaintances kissing each other or shaking hands during epidemics, against the use of strange water-closets, the purchasing of second-hand furniture, the taking in of stray dogs and cats, etc., because all these might carry infectious material and spread an epidemic.

Burial of the dead in churches ought to be discontinued, because we do not know how long the infectious agents may remain virulent, and an epidemic be re-awakened by building alterations.

As infectious diseases are often communicated in the public schools, Hahnemann says: "It should be impressed upon the teachers not to admit any sick child to the classes, whose altered appearance betrays the commencement of a disease. Besides, a sick child can learn nothing."

"In times of prevailing sickness, the clergymen should publicly warn the members of their congregations not to come to church when they are feeling indisposed, and thereby expose their neighbors to danger."

Hahnemann advocated the governmental supervision of the trade in *food-stuffs*, and punishment for the sale of damaged products. He calls attention to the fact that most towns were not built so as to favor the health of the inhabitants. High walls, when not intended as fortification against invaders, are detrimental in that they prevent access of fresh air. Streets ought to be wide, and the houses be separated by gardens, so as to favor good ventilation.

When we compare Hahnemann's sound views, immense knowledge and wise teachings regarding public and private hygiene with the meager work of the best of his contemporaries, under conditions of hygienic ignorance which we can now scarcely realize, we must characterize the founder of homœo-

pathy as being also a *pioneer* in *hygiene* of the greatest originality of thought, deserving the highest esteem and admiration of every unbiased reader of his works and student of the views and practices of his time.

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ADDRESS COMMEMORATING THE PUBLICATION OF HAHNEMANN'S
ORGANON.

BY

THEODORE J. GRAMM, M. D., PHILADELPHIA.

(Delivered before the Homœopathic Medical Society of the County of Philadelphia.)

WE are assembled for the purpose of commemorating an event which inaugurated a new era in the history and practice of medicine. Just one hundred years ago Samuel Hahnemann published the first edition of the *Organon of the Healing Art*. It is appropriate at this particular meeting of our County Society that we take notice of so important an event as the publication of that book, for it is one whose influence, though unconceded and unaccredited, has gone forth wherever civilized men are found, and wherever any efforts by educated physicians of whatever sort, have been made for the alleviation of human ills. Indeed, so far reaching has been the influence of this book and of the other writings of Hahnemann, that no account purporting to relate to the history of medicine can possibly be complete which ignores it.

On an occasion like the present one, the one hundredth anniversary of the publication of an epoch-making book, the innumerable facts, both entertaining and instructive, which ur-

gently invite attention are simply overwhelming, so that in the few moments allotted to this address it will only be possible to touch lightly upon a few points of interest concerning this remarkable man and his much more remarkable work.

The story of Hahnemann's life has been told in most entertaining style by a number of biographers, and will amply repay perusal. Among them our own Dr. Bradford ranks high, and I desire to pay this brief tribute to his admirable work.

Looking for a moment at the man himself, we might say that Samuel Hahnemann was a physician; and will you pardon me for the quite obvious suggestion when I ask that we remember that he was not always a *homœopathic* physician, with all the glory attaching to that word and with all the obloquy ever since attempted to be cast upon that term? He was a physician; a *regular* physician, and a mighty good one! But let us not anticipate.

Christian Frederick Samuel Hahnemann was born at Meissen in April, 1755, and died at Paris in 1845. Thus briefly might the historian record two facts; but between those two dates what a mass of living, palpitating facts would lie buried; what aspirations, what toils, what successes, what distressing rebuffs, in short, what vicissitudes, ranging through the entire gamut of human experiences! But why is this more true of Hahnemann's than of many another human life? I reply because that man possessed a soul big with benevolence and an intellect far more highly endowed than that of most men; and because he spent himself incessantly, in order to benefit mankind. Moreover, when we review his life as a finished whole, it becomes manifest his destiny determined that he should not only be deeply concerned with the greatest problem affecting physical man, namely, his health; but that he should rescue from hopeless confusion the noble Art of Medicine and furnish a groundwork upon which the Science of Medicine may be builded. For, mark you, after it had been given him to apprehend the distressing state of medical practice, the conviction was impressed upon his soul that a gracious Providence did not abandon man, created in His image, hopelessly, unavailingly to seek for means to conserve and recover the boon of health. Therefore, he interrogated Nature, and she yielded to his quest, graciously, abundantly as is her wont, and bestowed the gift of a knowledge of one of her laws, lying close at hand, easy of comprehension and majestic in its simplicity. It is just

this thought which he emphasized in those lines from Gellert, which grace the title page of the first edition of the *Organon* :

Die Wahrheit die wir alle nötig haben,
Die uns als Menschen glücklich macht,
Ward von der weisen Hand, die Sie uns zgedacht,
Nur leicht verdeckt, nicht tief vergraben!

These lines breathe the spirit of faith, of gratitude, and of benevolent conciliation; but the motto on the title page of the subsequent editions sounds the clear note of challenge: "Aude sapere," and the gauntlet is thrown down and dares you to be wise; and enjoins you to be wise; and invites you to be wise!

Hahnemann was born in the picturesque town of Meissen, lying at the confluence of two streams, with its mountain, Afra, not far remote. The principal industry of its 4,000 inhabitants was that of decorating the newly discovered china glass or porcelain. His father was a designer of porcelain painting, an art whose secrets jealously guarded and oath-bound, none could practice except those of tried integrity. Already we behold a gift of Nature to Hahnemann, for his father was not only a man of integrity, but he had some uncommon ideas concerning the training of children. Hahnemann has given a touching tribute to the memory of this man, characterized not so much by filial affection, though there is all of that, but also marked by a fine discernment of those qualities whose influence make for nobility of character and seriousness of purpose. Furthermore, Hahnemann's father was in the habit of giving his son "thinking lessons" from early childhood onward; and often enjoined the precept to accept nothing blindly on authority but to investigate for himself. Those of us who know something of the influence of heredity and environment and are familiar with the stern teachings of his later life experiences know why Samuel Hahnemann was sincere, unostentatious, despising sham and fraud, incessantly studious, thoughtful, observant, judicial, not given to idle dreaming, nor inclined to accept precipitate and unwarranted conclusions.

Of the early life of Hahnemann we know that his educational opportunities were of the best, and I use that word with discrimination, for they are not deserving of that superlative term by reason of the fame of place or of personal reputation

of instructors, but because his early mental training was conducted amid environments which in the experience of a number of the world's great men have proven best suited for that purpose. I refer to a good private school and personal contact with sincere teachers. We may glean an early forecast of the inclination of his mind from the title of his thesis, written in Latin, on leaving school. He wrote upon "The Wonderful Construction of the Human Hand."

Hahnemann's entire life seems to have consisted of one prolonged course of educational preparation for the great purpose of his life. This is true wherever his lot was cast, for it matters not what privations he must of necessity endure, the opportunities for a broad and liberal education were ever at hand and were amply improved. To trace the incidents of his life in illustration of this statement would now be simply a matter of detail, and after reviewing them as his biographers have done, we may well believe Guizot, the French Minister of Education, when he said: "Hahnemann is a scholar of great merit." As a chemist he developed pronounced skill and much fame. There are tests devised by him used in the chemical laboratory even to this day. In medical matters his opportunities were abundant, both clinically and in study, and later in public and private practice his attainments were eminent. To deny this would simply indicate malice.

While occupied in his professional calling at Gommern in 1774, having had much actual personal experience with the practice of medicine, being endowed with an inquiring and judicial mind, equipped with a knowledge of botany, chemistry, mineralogy, physics, pharmacy and drug pathogenesis, having a working knowledge of many languages, familiar with the ancient and modern literature of many subjects, we find a startling frame of mind gradually developing in this unusually well equipped physician, namely, an utter dissatisfaction with prevalent medical practice. He said it was agony for him when he had to heal the sick, to prescribe, according to such and such a hypothesis concerning diseases, substances which owe their place in the *materia medica* to an arbitrary decision. Being a man of strong convictions and ready to follow the dictates of Reason to their logical conclusions, we find him abandoning the practice of medicine that he might no longer incur the risk of doing injury; and he thereupon engaged exclusively in chemistry and in literary pursuits. Think of the struggle such a de-

cision must have cost, and what a sacrifice did it involve, particularly in the light of former trials.

We should naturally now direct an inquiry into the state of medical science at a time when a physician of high attainments like Hahnemann, reached such a blighting judgment and fortified it by an immolation so startling. But to illustrate the polypharmacy of that day it would be required to recite prescriptions strongly suggestive of the contents of the witch's chaldron in *Macbeth*. These are matters of history and need not detain us. And this is saying nothing about the theory of medicine, or rather medical theories entertained. These latter, however, were the natural results of the methods of inquiry in vogue in medical matters, and were evolved by the faulty deductions countenanced at that time. Were this theme enlarged upon we would be compelled to measure the sonorous claim of those who tell us that they are "guided by the accumulated experience of the ages," and what a pity it would be to do that! But if the thought obtrudes that the state of medicine was only bad in some obscure German villages, I beg of you to examine critically the treatment applied in the last illness of George Washington or in some other contemporaneous cases recently unearthed as curiosities by some gentlemen. Do you know, someone not long ago said that scientific medicine only dates from the time of Pasteur? . . . and Pasteur not even a doctor!

If we would attain to some understanding of the circumstances which directly led to the discovery of the underlying natural laws, and to the promulgation of an entirely new and scientific system of medical practice based upon them, we must bear in mind that this chemist, this scholar, this practical physician had become heartsick with the unscientific and haphazard therapeutic methods of the day; in this Art, the most important to human life, he found uncertainty and loose methods of procedure against which his soul rebelled. His state of mind and the unimpeachable facts of medical history are portrayed in his article entitled "*Aesculapius in the Balance*" and in some other publications. As the next step we should review the incidents associated with the translation of Cullen's *Materia Medica* when some contradictory statements respecting the action of Peruvian bark directed Hahnemann's attention and interest into those channels, consisting mainly in the entire re-examination of the action of that and of other drugs, which led to the

promulgation of the doctrines of homœopathy. You know the story, and I need not rehearse it now. Only this I would say, that six long and active years elapsed, during which he was diligently engaged in making provings of quite a number of drugs, twenty-seven in all, before he actually did publish to the world the principles underlying the practice of that which was subsequently denominated homœopathy. This discovery he published while residing at Königsutter in 1796, in an article on "A New Principle for Ascertaining the Curative Action of Drugs," wherein after stating the condition of medicine then existing, he shows that chemistry does not reveal the action of drugs in disease; that their effects upon animals are not dependable guides, but that drugs should be tested upon the healthy human body. A year later, the article "Are the Obstacles to Certainty and Simplicity in Practical Medicine Insurmountable?" appeared, advocating the use of a single, simple remedy. After eleven other publications, his work on "The Medicine of Experience" appeared in 1805. This was the forerunner of his greatest work. Its style is less autocratic and should be read by everyone. In 1809 appeared his monograph on "The Three Possible Methods of Curing Disease." Then, in 1810, at Dresden, published by Arnold, appeared the "ORGANUM der Rationellen Heilkunde."

Let me emphasize a fact here: everyone will be most woefully astray in authentic history who fails to appreciate that Hahnemann's early publications had by no means the object of founding a sectarian school of medicine, but he simply directed specific attention to certain drug actions known to Hippocrates and to subsequent writers, and showed clearly and concisely that these had a far wider range of applicability in therapeutics than anyone previously conceived. Sectarianism with all its mournful ills, therefore, was forced upon him, just as it was forced upon Hans Burch Gram and his associates, who first introduced homœopathic practice in America.

During this hurried survey, it matters not where the inquirer may choose to pause, or what sidepaths his fancy may pursue, he is sure to encounter instructive and interesting details which will repay close examination. Hahnemann and his work may be profitably studied from many points of view; for example we might contemplate his personality, the incidents of his life and death, and the later story of Montmartre and Pere le Chaise, with which Dr. Bradford and Prof. Platt, and

this college played a commendable part. We might note Hahnemann's contributions to chemistry and pharmacology; his conception *de novo* of hygiene. It would be entertaining to review his great success at Paris, to which Albrecht has referred as "Die Glänzzahre des Alters." Or we might pursue a different path and examine his writings and discover his endowments as a lucid thinker, or see in him a brilliant author as displayed in his thesis for the Leipzig University. I wish we had time to rehearse that event. An amazing story would be unfolded in examining the reception his new doctrine received, and we would be confronted by the enigma of explaining the unutterable folly of trying to suppress a new system of therapeutics by calumniating its author and persecuting its adherents. But after we had conducted such an inquiry we would know something of the history of homœopathy, which, said Dudgeon, is the indictment of the medical profession. Moreover, such an inquiry would reveal Hahnemann as a scholarly and practical physician, and one could not avoid the conclusion that judicial fairness, and of course the truth, characterized the generous comment of Valentine Mott, the American surgeon, when he said that "Hahnemann was one of the most accomplished and scientific physicians of the present age."

The treatment to which the work and person of Hahnemann were subjected will remain a lasting disgrace upon the pages of history. This matter need not be rewritten, but a few words from Dr. Dake's terse statement may not be out of place. He says: "Though Hahnemann had little to expect from a school that had persecuted a Harvey for daring to discover the circulation of the blood, and a Jenner for the introduction of vaccination, he did expect and was disappointed that he did not receive some credit for the honesty of purpose and scientific attainments which before had always been accorded him."

But think you that these deplorable experiences embodied merely the results of just, scientific criticism? Let us see by another analogous case. Harvey and Jenner have been referred to and others might be mentioned; but those of you to whom the history of medicine appeals, are familiar with the story of Semmelweis. Some thirteen years ago I made available to English-speaking students the incidents of that man's life work, which consisted not only in a theoretic but also in an actual demonstration of the antiseptic method in midwifery, whereby he achieved results unheard of in the history of medi-

cine, and upon which even to this day directly rest the later triumphs of abdominal and general surgery. We have in the meantime heard much of Pasteur, and Koch, and Lister and a host of others, but Semmelweis, after a life tempestuous, unutterably sad, ridiculed by the medical authorities of that day and abused beyond endurance, died in a mad house. Was this also just, scientific criticism? The history of homœopathy and of the antiseptic method resemble each other in several particulars, so that it was an apt comment, which a biographer made when he said that "Men have ever crucified their benefactors!"

And thus we are again brought to those lines from Childe Harold:

"He who ascends to mountain tops shall find
 The loftiest peaks most wrapped in clouds and snow;
 He who surpasses and subdues mankind
 Must look down on the hate of those below.
 Though high *above* the sun of glory glow
 And far *beneath* the earth and ocean spread,
Round him are icy rocks, and loudly blow
 Contending tempests on his naked head,
 And thus reward the toils which to those summits led."

HYSTERIA—WHAT IT IS AND WHAT IT IS NOT.—Dr. Charles K. Mills (*Am. Jour. of Insanity*) enunciates the following interesting conclusions:

1. Hysteria is a disease called functional because its material pathology is not understood, although it has such a pathology.
2. It is a disease which has for its basis a constitutional condition spoken of, with more or less accuracy, as temperament, neuropathy or degeneracy.
3. It is a disease which manifests itself by well marked symptoms, motor, sensory, vasomotor, visceral or mental.
4. Hysteria may be caused in a variety of ways, the chief of which is suggestion, although emotion, physical injury or disease and other causes may enter.
5. Emotional phenomena are frequently present in hysteria.
6. Hysteria is favorably influenced and sometimes cured by psychotherapy, but may require for its cure auxiliary measures, such as rest, drugs, food, massage, electricity, or fresh air.
7. Hysteria is a psycho-neurosis, not in a technical sense an insanity.
8. It must be differentiated from neurasthenia.
9. It is not simulation.
10. Neurasthenia or simulation may be present in the same case with hysteria.

IS HOMŒOPATHY SCIENTIFIC?

BY

CHAS. W. PERKINS, M. D., PRINCETON, NEW JERSEY.

MANY years ago, during conversations at the famous Carlton Club in London, Lord Beaconsfield, the famous Premier of England, was often the subject of much vituperation by other prominent men of his time. Medicine also had its fling at him. Basoni, his nephew, once said, he had often wondered why Disraeli had a quack (meaning a homœopath) for a physician. Sir Alfred Bull, the great London surgeon, replied, "similia similibus curentur." It might be interesting to note Dr. Kidd remained to be his physician until his death. Such is the attitude in the past that has been taken against homœopathy even when the world's famous intellects have been patrons of our school.

I am thankful to say, our school is beginning to be wonderfully respected, principally as the result of modern scientific knowledge. The man who practices homœopathy if he adheres to his faith, not only gains respect for himself, but for homœopathy in the community in which he practices.

It might be well here to quote an article published in the *New York Medical Journal* of January 30, 1909. "Dr. Vanderveer, of Albany, in an address on professional ethics shows not only tolerance, but respect towards the members of the homœopathic school. He says, the history of medicine shows that medical men have not been imbued with a liberal spirit. Science has ever had to battle with superstition and with fears of the eternal fitness of things. A truth once ascertained surrounds itself with a wall of snugness, and the new facts to be derived therefrom are frequently barred from exploitation by the very disciples of the new idea. Does anyone suppose that homœopathy would to-day be a sect of its own, had the contemporaries of Hahnemann given the proper attention to his theories and their application, had they weighed thoroughly the contention of the day that the abuses of medicine as manifested in the immense dosage system then in vogue was an evil to be mitigated?"

Many members of our profession are at times inclined to be sceptical of drug action and especially some of us do lack faith

in homœopathic prescribing. We often seem willing to do anything that will apparently give results immediately, without considering the untoward effects and the results from vitalistic standpoints.

Homœopaths are by reason of training vitalists. Their mode of procedure is to strengthen the human system to the point of resisting the disease. Not killing the disease by means of drugs, and very often causing evil effects to the patient in the meantime. I furthermore say that if *similia* is a true law of cure it ought to be practiced; if an absurd theory it should then be discarded.

Eminent physicians of our school very often claim to be pure homœopaths, but upon investigation we find their practice savors strongly of allopathy.

I have frequently heard patients say they wished homœopathic treatment and rather than give them mongrelism it would be better to give them good allopathy.

The homœopathic system of medicine has stood the critical test at the bedside for a century—such evidence should make us hesitate to undervalue it before compromising with other therapeutic methods, and if statistics are correct, our results weigh greatly in favor of homœopathic practice. Many of our esteemed colleagues, especially the younger men, in order to win the confidence of patients may be misled by so-called cures, specifics, combination tablets, etc.; many of which compounds are flooded on the markets by so-called homœopathic pharmacies for commercial reasons.

If we were to study the matter in closer detail we would find that many of our schools demand these "lazy men's tools," and why? Because they are too lazy to study out the case and hunt for the indicated remedy.

Such remedies will at times apparently give desired results, but eventually may arise a difficult case and they will utterly fail. What is the sequence of such methods? The physician is disgusted and left like a ship without a rudder. Scepticism is the result—if the true remedy had been carefully elicited, with some mental effort, according to the symptoms and pathological condition one would not only have been mentally stimulated, but accomplished permanent results.

Those of us who fear to burn midnight oil with brain oil, will at some future date regret our shiftless prescribing.

Our friends, the members of the dominant school, are ap-

propriating our methods and remedies too fast for us to lie dormant; we must be up and active by asserting ourselves for the principles which we represent, this can be done by explaining our methods to patients, then their confidence in our system will be established and they will not revert to palliative measures.

The laity's general idea of a homœopathic physician is that he does not believe in surgery; that he carries a hand-bag and dispenses sugar pills dissolved in water. Such remarks are often made among intelligent people. Let me inquire of you, Who is responsible for this ignorance?

All nature works by law. Law is the governing process of the universe. The forces of light, heat, sound, electricity, gravity are governed by natural laws, but we must also consider that natural laws are not infallible. In the meantime let me ask you to consider why therapeutics should not be governed by a force or law, whatever that law may be called.

For all of us, to be good, practical physicians, I think we should recognize the limitations of the homœopathic law.

I personally believe that if a cure is ever made by the force of medicine, the cure is wrought by homœopathic means irrespective whether the medicine is prescribed by an allopathic physician, or otherwise. Palliation on rare occasions may be necessary and we may be obliged to depart from similia for an interval, but, like the prodigal son, we soon return to the arms of our father, the only true therapeutic law, more established in the firm belief of homœopathy.

It is well known that it is utterly useless to try to make a new heart out of a fatty one, or to make new kidneys out of an old pair that has worked for years. If we incessantly stimulate these organs it is only adding fuel to the fire. As the result, the flame will burn brighter and die quicker. So it is with the human economy. At times it is necessary to stimulate in order to bridge over a severe crisis, but stimulation should cease when necessity ceases.

Lo! I see the bride Similia gracefully gowned in pure white, patiently waiting, only a little longer, to be wedded in a true scientific spirit to the physicians of the world.

Many honorable and high minded men in the medical profession have of late years come out to vindicate similia and the small dose. A very recent acknowledgment has come from Dr. Amalio Gimeno, professor of therapeutics of the medical

faculty of Madrid, as well as ex-minister of public instruction, who during his dissertation on anti-tuberculous therapeutics, held in the National Congress of Tuberculosis, at Saragoza, Spain, in October last, proclaimed Hahnemann a genius. "Hahnemann," he asserted, "foretold at the beginning of the nineteenth century the modern route which science would take, and I regret to have offended him and his followers in former years."

He expressed his sincere feelings as follows: "What I have stated is so positive that I, the author of a work on therapeutics, published in Valencia, twenty-five years ago, and a text book in the universities of Spain, highly deplore to have devoted in the said work some depressive pages to Hahnemann and his disciples, a wrong which modern discoveries are now committed to mend; the pages I wish I were able to tear out of my book."—*Review de Medicina Pura*, Barcelona; HAHNEMANNIAN MONTHLY, May, 1909.

The *Medical Record*, of December 2, 1906, published an account on quinine fever. To quote the article: "The perverse action of drugs offers a great field for research work and has attracted the attention of physiologists and laboratory workers for years." It finally goes on to say: "The first to report the untoward effects of quinine fever was Samuel Hahnemann in his translation of William Cullen's *Materia Medica* in 1790. He says, 'For experiment's sake I took 60 grs. of cinchona bark twice daily for a few consecutive days; my feet and hands became cold, followed by a feeling of malaise, palpitation and apprehension, then a beating headache, flushing of the cheek, thirst and all the usual symptoms of intermittent fever. These symptoms lasted two or three hours at a time and returned after each dose. I stopped the bark and I was healthy.'"

These certainly are characteristic words of Hahnemann, and quoted verbatim from a prominent allopathic journal.

Surely, our friends, the old school, are beginning to see the dawn of a new therapeutic era. If not allied to homœopathy, it certainly follows Hahnemannian principles.

The recent knowledge gained by use of the X-ray shows that by its action upon the healthy living organism, a growth can be stimulated into existence resembling microscopically and clinically epithelioma, when, as we all know, the influence of the X-ray upon true epithelioma acts in a curative manner.

Observant writers in medicine have recently remarked, there

is a startling similarity between the theories elucidated by Hahnemann and the most recent developments in lines of serum therapy.

As an instance I might quote the words of Von Bering, the discoverer of anti-toxin, when speaking of tuberculin therapy. He says in spite of all scientific speculations and experiments regarding small-pox, vaccination, Jenner's discovery remained an erratic block in medicine until the biochemically thinking Pasteur, devoid of all medical classroom knowledge, traced the origin of this therapeutic block to a principle which cannot be better characterized than by Hahnemann's word, "homœopathic."

Indeed what else causes epidemiological immunity in sheep, vaccinated against anthrax than the influence previously exerted by the virus, similar in character to that of the fatal anthrax virus? And by what technical term could we more appropriately speak of this influence, exerted by a similar virus, than Hahnemann's word "homœopathy"?

I am touching here upon a subject anathematised till very recently by medical pedantry; but if I am to present these problems in historical illumination, dogmatic imprecations must not deter me. They must no more deter me now than they did thirteen years ago, when I demonstrated before the Berlin physiological Society the immunizing action of my tetanus anti-toxin in infinitesimal dilution.

On this occasion I also spoke of the production of the serum for treating animals with a poison which acted better the more it was diluted, and a clinician, who is still living, remonstrated with me, saying that such a remark ought not to be made publicly, since it was grist for the mill of homœopathy.—Quotation from *Modern Pithisio-Genetic and Pithisio-Therapeutic Problems in Historical Illumination*, 1906, by Von Bering.

The investigation of Wright in relation to the opsonic index and the treatment of disease by the product of the disease itself, with the minimum dose is certainly another interesting scientific step forward along homœopathic lines.

Dr. Cabot, of Boston, speaks about the efficacy of tuberculin in small doses as another verification of "similia similibus curentur" in allopathic ranks.

It is hardly necessary for me to speak of the recent interesting discovery in modern chemistry have shown the forceful reaction upon the human organism of such metals as gold.

platinum, silver, etc., when injected into the system in such small doses as one one-thousandth to one ten-thousandth of miligram or strengths corresponding to our 6x and higher potencies. Robin. *International Clinics*, 1906.

Professor Bailey, of Topeka, Kansas, has demonstrated that a drug diluted up to a point somewhere between the twenty-fourth and the thirtieth dilution, will, because of its presence, definitely cause transmission of electricity through the solution more rapidly than when the current is transmitted through distilled water. *HAHNEMANNIAN MONTHLY*, June, 1909, p. 425.

To proceed further, in order to show the tendency of therapeutics, I will quote from an editorial in the *New York Times*, referring to the relationship of the two schools of medicine:

"When one remembers the vivacity of the emotions with which, not many years ago, doctors of the old or regular school which, by the way, was neither old or regular—regarding the disciples of Hahnemann, there is good excuse for a pretence of wonder at the amicability with which the 'allopaths' now talk about the 'homœopaths' and the frequency of their invitations for a union of effort in bridging the chasm between the two. And this change is not due entirely to the importance of surgery, in which there has always been a comparative agreement of opinion, and no such division into schools as in the matter of drug administration. It is rather the result of an appreciation on both sides that by no means as much can be done with drugs, whether in big or in little doses as each side used to believe, and to the willingness of both to confess the errors and excesses of the past. And it is to be noticed, that this willingness finds particularly strong expression among the 'regulars.' They are even able to admit, as did the *Medical News* last week, that 'they are some very striking phenomena in the developing science of physical chemistry which shows that Hahnemann's high dilution theories, while purely dogmatic and unsupported, contained some very interesting anticipations of latter day chemistry.' And the *News* added: 'Perhaps the most suggestive observation among recent chemical discoveries is the fact that in very dilute solutions such substances as platinum and silver and other metals may acquire physio-chemical properties immensely more powerful than any mere chemical affinities. The colloidal solutions of the metals, the principle of dissociation in solutions, and the so-called metallic ferments with their wonderful properties are only so many

examples of how much science may develop along lines where such development is least expected.' "

That, for anybody who can dig down through its hard words, is no small contribution toward the establishment of a new "era of good feeling" in the medical world. And the eminent Dr. Osler, announced in the course of his farewell speech in Baltimore that there should be a fusion of the schools, that it was time for the homœopathic brethren to be admitted to the fold, and that squabbles about drugs should no longer separate men with the same hope.

Another valuable recognition of homœopathy has come from the famous clinician of Paris, Professor Huchard, member of the Academy of Medicine at the Hospital Necker, acknowledged homœopathy before three hundred physicians, mostly members of the dominant school: "There was not a single protest raised against homœopathy, but frequent applause followed the bold assertion of the eminent physician. He finished by saying, I have the courage of my convictions and I am not afraid to openly proclaim it." *HAHNEMANNIAN MONTHLY*, October, 1907.

May I venture to say, if only the many members of our school would have the courage of their convictions and not be afraid to proclaim that they are disciples of Hahnemann, such influence would have a powerful effect in strengthening our ranks.

Whether it be physical, mechanical or chemical I have endeavored to show that all branches of therapeutic investigation seem to point more definitely and accurately toward Hahnemann's law of cure.

In the old Viking Mythology a story is told of an immense whirlpool along the north coast of Norway near the land of the Midnight Sun. Ships once engulfed in this maelstrom never return.

I fear modern medicine, so-called, is a therapeutic maelstrom.

Many various sects have arisen as the result of disbelief in therapeutics, such as Christian Science, Emanuel Movement, Doweyism, along with the therapeutics Nihilism of the dominant school, all are endeavoring to sail toward the goal, but their pilots have no therapeutic compass to guide them, and the whole armada is foundered in the maelstrom.

Not so with the homœopathic school, as evidence has shown

the therapeutics of which remain on a firm foundation, a law of cure. Our therapeutics are guided by a true compass—we reach the port, the port of cure which is the ultimate aim of a true physician.

Have any of you ever visited the famous cemetery of Pere la Chaise, in the heart of Paris, where the immortal Hahnemann lies sleeping alongside and in the vicinity of some of the greatest savants of the age? True it is a fitting place for the great man to lie resting. When we look at the simple but beautiful monument over his grave, it is only then, that one will realize the great revolution in medicine this genius of a man has brought about, and on the second thought we again are unable to realize how this remarkable man who only retired once in every forty-eight hours, was able to accomplish so much. He even lived to be the ripe old age of eighty-eight years. Then, again, we can see how in such a long lifetime and with such mental capacity that he was able to perfect this marvelous system of medicine which has remained practically the same as far as therapeutics is concerned, for almost a hundred years.

Goethe's, the philosopher and writer of *Faust*, prophesy in regard to Hahnemann and homœopathy surely has come true. He said:

"Hahnemann, that rare combination of philosophy and learning, whose system must eventually bring about ruin of the ordinary receipt-crowned heads, but is still little accepted by practitioners and rather shunned than investigated." *Zeiste. Blotter*, Vol. II., History of Hahnemann, p. 257. Hencke.

THE ETIOLOGY OF TRACHOMA.—The author discusses the method of staining trachoma bodies and makes the following points against the contention that trachoma is a disease confined to the epithelium: First, clinically the disease is known to extend deeply; second, in cases where the trachoma bodies are numerous, they disappear on the surface after a few days treatment, but soon reappear if the treatment is withdrawn, showing that they had been present in the deeper tissues, and third, the follicles cut in section show the bodies in the epithelial cells, the sub-epithelial tissue, the lymph spaces beneath, as well as in the cells and between the cells of the follicle. It is probable that these bodies are living agents allied to the protozoa.—Richard Greeff, *Annals of Ophthalmol.*

THE TREATMENT OF MENINGITIS.

BY

HENRY BREWSTER MINTON, M. D., BROOKLYN, N. Y.

(Read before the Homœopathic Medical Society of the State of New York,
February, 1910.)

MENINGITIS comprises in one generic term a number of diseases of different types and causations. All types have this in common that they are distinctly grave and often fatal. One prominent authority remarks that when we consider that simple and tubercular meningitis are always fatal it is rather the wonder that any cases recover when they are once stricken with this type of disease.

There are also cases which present meningeal symptoms associated with a variety of diseased states as in the initial or terminal stages of the acute infectious diseases and in conditions of malnutrition and intestinal toxemia. Such cases are not governed by the same considerations as to fatality as are those of true meningitis. Their gravity depends entirely upon the disease with which they are associated. At times they very closely simulate meningitis. I have reported such a case occurring with gastro-intestinal symptoms and malnutrition. The symptoms were initiated by vomiting. The child was thin and emaciated. Its temperature was elevated, its pulse and respiration irregular. It was dull and drowsy with staring eyes, retracted head and rigid neck. Its hands were flexed. Kernig's sign was present and convulsions developed. Vomiting still present was of a projectile character. The case lacked only the confirmation of a lumbar puncture to make the diagnosis of meningitis complete and positive. The offending diet was stopped and in two days not one of this train of symptoms remained. After a prolonged and tedious recovery from the gastro-intestinal attack the child grew to a healthy, robust girl without a trace of impairment of function of the nerve centers.

The treatment of cases presenting this class of symptoms is not therefore the treatment of meningitis but is the treatment of the diseased process upon which this train of symptoms depends and with which it is associated.

The patient suffering from meningitis should be put in bed under the care of a competent nurse and every precaution taken

to insure perfect rest and quiet. In the early stages the diagnosis may be in doubt but the utmost care should be observed in all cases where meningitis is a possibility to enforce rest and quiet. I know of one case where the firing of a cannon in celebration of the political victory of a local candidate proved the turning point in the illness of a little girl who lay sick from meningitis within sound of the guns. The periods of apparent improvement which occur in these cases should not lead the attendants to grant the patient liberty to sit up or move about in the belief that they are better. I have seen one patient with rigid neck, Kernig's sign, marked stupor and delirium in a period of improvement permitted to walk to an adjacent lounge where she assured me she felt much better and had done herself no harm. She was immediately put back to bed but the return of the serious symptoms and their progress to the death of the patient a few days later at least demonstrated that the proceeding had done the patient no good. It is necessary to give strict orders relative to these seemingly obvious measures. Isolation in the epidemic form of the disease should be practiced. A simple, easily digested food should be ordered, preferably of a liquid character. Those patients who become somnolent or unconscious should be urged to take food and when unable to swallow properly should be fed either by the stomach tube or by rectal alimentation.

Hot baths may be used in suitable cases and are especially recommended in the cerebro-spinal type of the disease. The temperature of the bath should be 100 or 105, the bath should be continued for 20 minutes, and its repetition should be ordered in three hours. Palliative measures, such as morphine, chloral, potassium bromide, veronal, etc., are practically useless and often harmful.

As soon as the symptoms warrant the assumption that a meningitis is present a lumbar puncture should be made for the purpose not only of establishing the diagnosis but of determining precisely what type of the disease is present and for such benefit as may be directly attributed to decreasing the intertheal pressure and in the epidemic type of the disease for the purpose of introducing antimeningiococcic serum into the *subarachnoid* space.

Lumbar puncture was first performed by Quincke. It consists in introducing a suitable trochar and canula, one about one millimeter in caliber, into the spinal canal between the third

and fourth, or between the fourth and fifth lumbar vertebrae. This must be done under the strictest antiseptic precautions. A line is drawn across the highest point of the iliac crests. This passes through the fourth interspace where the puncture should be made. The spinal cord terminates at the lower border of the first lumbar vertebra so that the puncture may be made a space or even two spaces higher but the lower space has been found to offer better facilities for the securing of a fluid containing more distinctive elements as pus cells, bacilli, etc., upon which the correct selection of future measures may depend. In younger children the trochar may be passed in at right angles to the spine and between the spinous processes to a depth of two or three centimeters. In older children and in adults on account of the more oblique direction of the spinous processes and the greater density of the interspinous ligament better results are attained at the side. By inserting the point of the trochar at the side of the spinous process and a little below the interspace and directing the course toward the median line and upward, cephalward, so as to avoid the interspinous ligament and pass between the laminae the canal is readily entered. In adults the needle must be passed in to a depth of four to six centimeters. The patient is placed upon the right side with the spine slightly flexed, a position induced by making pressure upon the buttock and shoulders, not upon the neck. This separates and differentiates the spinous processes and the fourth interspace having been selected by its relation to the iliac crest, as already mentioned, the needle is introduced from the lower side of the spine.

The normal cerebro-spinal fluid is clear and colorless. It flows from the canula when under normal pressure drop by drop, but when under the increased tension of an accumulation within the membranes may flow in a very free stream. It contains from one-twentieth to one-tenth of one per cent. of albumin normally. This may be increased in tubercular meningitis to three-tenths per cent. and in cerebrospinal fever to six-tenths of one per cent. Normally there are few endothelial cells and leucocytes discovered microscopically in the sediment, while in tubercular meningitis lymphocytes are distinctly increased, and in cerebrospinal fever there is an abundance of polymorphonuclear and eosinophilic leucocytes. This is also true of the inflammation due to the pneumonococcus. The bacteriological findings either by culture or by direct examina-

tion of the sediment may reveal the presence of the pneumococcus, the tubercle bacillus, or the diplococcus intercellularis. The information thus gained indicates the most appropriate method to be adopted in the future management of the case.

In an acute serous meningitis due to trauma the fluid withdrawn would be free from leucocytes and bacteria. It would show an increase of tension, that it would flow from the canula with increased force. The temperature would be increased and the symptoms of stupor, vomiting, etc., would be present. Such conditions are induced by trauma or by the presence of neighboring infection usually in connection with trauma but without infection of the meninges. The removal of the excessive pressure by drainage is the appropriate method of treatment.

Cases in which the tubercular nature of the disease is shown by cytological and bacteriological examination of the fluid withdrawn will go on to a fatal termination. This condition represents a terminal stage in the tuberculous process and successful management of the case can only be hoped for when treatment is undertaken at a much earlier period of its history. If means then adopted are unsuccessful the management of the case when the meninges have become involved is hopeless. Meningitis dependent upon infection with the streptococcus or pneumococcus is almost always fatal but meningeococcic cases sometimes get well.

When the case is shown to be of the cerebro-spinal type by the finding of numbers of polynuclear leucocytes and by the presence of the diplococcus intercellularis the use of the Flexner serum offers the best prospect for the control of the disease. Reports from this method of treatment indicate a mortality of about 42 per cent. as against 90 per cent. without it during the first two years of life, and still better results for other ages. Even as low as fifteen per cent. has been reported between the fifth and tenth years, and 26 to 30 per cent. for other ages. The indications for the success of this serum are favorable, though the final test of its efficacy during an epidemic has not been accomplished.

If the fluid from the lumbar puncture proves to be turbid and the symptoms of the child are those of epidemic cerebro-spinal meningitis it is advisable to inject 30 c.c. of the Flexner serum at once. The serum is useless when used subcutaneously and it is intended for the epidemic form of the disease

only. When the lumbar puncture has been performed the tension is reduced by the withdrawal of 100 to 110 c.c. of cerebro-spinal fluid and the serum is introduced through the same canula before its withdrawal. In severe cases the dose is repeated every day for five days and then after one day's rest the treatment is resumed as before.

I have referred to lumbar puncture and the serum treatment first because these are essential features for prime consideration as soon as the case has reached a stage where the actual existence of a meningitis is suspected. But there is a stage preceding the crystalization of the symptoms into the meningeal type in some of these cases and there is opportunity in all for effective work by the proper use of the appropriate remedy. Thus, while I have deferred the consideration of the remedy until this point, it is the essential of the treatment and is to be used whether our preconceived ideas of prognosis justify a hope of recovery or not. The properly selected remedy holds out an added ray of hope in even the most desperate case and in those where there is a reasonable possibility of recovery it proves the turning point to successful management. In those cases where the symptoms are of a meningeal type but no true meningitis has developed the results obtained are extremely satisfactory and where a meningitis threatens to develop as a complication in the course of some acute disease it may many times be checked in its incipency.

The two symptoms most characteristic of the existence of a meningitis aside from the evidence obtained from lumbar puncture are stiffness of the neck and Kernig's sign. The former does not usually develop until the second day and sometimes later. While they are useful in establishing the diagnosis they do not help us greatly in the selection of the indicated remedy. Stiffness of the neck and back are found very prominently under *bryonia* and *actea racemosa*. Rigidity of the spine, which amounts to the same thing in the cervical region, is a marked symptom of *cicuta*. *Opisthotonus* is found under *veratrum viridi*. Drawing the body backward is found under *opium*, and *can. ind.* together with others have similar conditions recorded in their pathogenesis. Kernig's sign is due to contraction of the ham-string muscles, causing them to exert a ligamentous action on the knee joint. Since these muscles extend over both the hip and the knee joints, it becomes impossible with any rigidity of the muscles to extend the leg into line

with the thigh when the thigh is flexed at a right angle with the trunk. Rigidity of these muscles is found under lyss., lach., amm. mur., ant. tart., cimex, phytolacca and rhus. One of these might be thus suggested but as the contracted hamstring is only a part of the general muscular rigidity other similar rigidities should be considered at the same time.

Vomiting, which is an early symptom and in some cases a continued symptom, is usually of a projectile type. It indicates more particularly ant. tart., sul., chloral and cup. ac.

The irregularity of the pulse whether slow as in the early stages or fast as in the very early and late stages brings up such a number of remedies that it is quite impossible to consider them, save as in connection with some individual case. The same is to be said of the irregular respiration, although camphor, opium, ant. tart., bell. and ailanthus are to be thought of, and if they correspond to the rest of the case should be used.

The cerebral symptoms are many and varied from the early indications of cerebral irritability to the complete unconsciousness of the late stages. In the consideration of these symptoms bell. becomes the remedy of chief importance, though it is at times preceded by acon. With an increase of the irritation of the nerve centers the pulse assumes the characteristically slow character of meningitis and there is less circulatory excitement than would be expected under bell. Here bry., apis, or cup. ac. may be better indicated. With an increase of the exudate and a consequent greater pressure the circulatory centers become depressed or paralyzed and the pulse again increases in frequency as we approach the terminal stage. In the cerebro-spinal form of the disease the stage presenting the slow pulse may be wanting and this also occurs in the pneumococcic and streptococcic infection. The slow pulse is more marked in the tubercular and serous type of the disease.

Returning to the cerebral symptoms, stupor suggests opium and can. ind., while convulsions serve to indicate the selection of can. ind., hyosciamus, veratrum viridi, and very prominently cicuta. The intense pain in the head may indicate actea. rac. bell., bry., cicuta, veratrum, gelsemium, or croctalis. Other symptoms of less constant appearance occur, as rolling of the head, which is found under veratrum; boring of the head into the pillow, under hell.; trembling of the muscles of the limbs, under gels.; jerking and twitching of muscles, argent. nit. and cicuta.

In the cerebro-spinal type of the disease cicuta has enjoyed a considerable reputation since its use in 1872 by Baker, of Batavia. Cuprum aceticum has long been held high in repute in the condition and was preferred by Goodno to cicuta in those cases where the cerebral symptoms predominate over the convulsive. Kali iodide has many very encouraging reports in its favor. It is used extensively by the old school. The determination of the most suitable remedy is only to be arrived at after a careful comparison of the symptoms presented by the case with those found in the pathogenesis of the drug. It is not my purpose to give an extended symptomatology, and the above indications are merely suggestive of the lines upon which the case may be advantageously studied.

DIABETES MELLITUS.

REPORT OF TWO CASES AT AUTOPSY.

BY

OTHMAR F. BARTHMAIER, M. D., PHILADELPHIA, PA.

(Read before the Clinico-Pathologic Society of Philadelphia, Pa., December, 1909.)

IN presenting this paper for your consideration, we report the findings of two cases, and it is only after considering the rather infrequent occurrence of diabetes mellitus, together with its still less understood pathology, that this is submitted for your approval.

We will say nothing of such conditions as are manifested by temporary glycosuria, particularly those of the nervous system, but confine this paper to the pathological findings of the pancreas in the condition known as diabetes mellitus.

It can be mentioned here, that Russell Cecil, in a series of ninety cases, collected from the United States and Canada, found that eleven of them showed no discoverable anatomical lesion in the pancreas with the exception that two were described as being small; several other investigators, we might add, have found in cases of undoubted diabetes no pathological change in the pancreas or any gross lesion in other portions of the body.

Before considering the pathology, it might be well to introduce here briefly, the anatomy and physiology of the pancreas.

Situated deeply within the abdominal cavity in the horseshoe curve of the duodenum, it presents itself as a rather well-protected organ. Its duct, together with the common bile duct, enters the duodenal portion of the intestines, and by this route, the *external* secretion of the pancreas comes to take its part in the performance of intestinal digestion. This is done through its ferments which are elaborated by the secreting alveoli of the parenchyma,—trypsin acting on the proteids, amyllopsin on the starches, and steapsin on fat. Alteration of this function finds its expression in disturbances of digestion and if a stoppage of this secretion takes place, muscle fibres, fat and starch may be recovered from the stools.

Independently of this, there exists it is supposed, an *internal* secretion, which is elaborated by the interacinar islands, the so-called Islands of Langerhans. They are groups of cells, distributed at intervals in the parenchyma and differ markedly from the cells of the ordinary glandular type. These islands are penetrated by numerous and tortuous capillaries and it is further supposed that through these channels, the internal secretion controls carbo-hydrate metabolism.

The rehearsal of the physiology is merely to illustrate the independence of the two functions of the gland, that of *external* and *internal* secretion, and to further illustrate, if for any reason, the external secretion is prevented from entering the intestines, characteristic disturbances of the digestion results, but carbohydrate metabolism is practically unchanged and sugar is absent from the urine. But given a lesion interfering with the function or functions of these Islands of Langerhans, which islands by the way, have no connection with the pancreatic ducts, then their secretion is interfered with and glycosuria results.

A brief history will show the two cases to be of undoubted diabetes mellitus.

CASE I.—Single, male, Christian, 24 years of age. Occupation, iron moulder. Family and personal history negative. His condition began with slight loss of weight, despite increased and almost ravenous appetite, together with extreme thirst and consequent polyuria. Urine: high specific gravity and containing variable amounts of sugar from the beginning of the condition up to death, which occurred after an illness of two years' duration.

Autopsy Record.—Apparently well nourished, though said to have lost considerable weight. A lobar pneumonia in the left

lower lung, upper lobe and right lung being normal. Cloudy swelling in liver and kidneys, aorta and coronaries slightly sclerosed. The pancreas being under-weight and almost one-half the normal size.

CASE 2.—Single, male, Christian, 42 years of age. Occupation, laborer. Family history negative, personal history insignificant. His condition began with progressive loss of weight, increased appetite, thirst, polyuria. Urine: high specific gravity, acetone and sugar continually present up to death, which occurred in coma, after an illness of one and one-half years.

Autopsy Record.—Abscess wound in the left lumbar region, internal organs comparatively normal with the exception of the pancreas, which was distinctly under weight, only sixty-five grammes, the normal gland weighing about ninety-five grammes.

The pancreas in both cases you have noticed was small, a finding to which some value may be attached.

Pathology.—It was here that we expected most and found the least amount of change and owing to the almost normal condition of the pancreas in both cases, we must necessarily contrast our normal findings with the pathological changes found by others, who have been fortunate enough to have investigated a larger number of cases. We mention too, in one case, the rather rare finding of an accessory spleen in the tail of the pancreas, encapsulated and completely surrounded by pancreatic tissue. What relation it might have to diabetes, we are not prepared to say, probably none.

In considering the changes microscopically, we will adopt Cecil's method of dividing the subject into three parts, namely:

Changes in the interstitial tissue.

Changes in the secreting parenchyma.

Changes in the Islands of Langerhans.

Interstitial Tissue Change; In a diabetes of pancreatic origin, the connective tissue increase begins between the acini, and if the lobules are involved, as they are particularly in chronic pancreatitis, then it is a rather late stage in the process.

In both our cases, the interacinar connective tissue was apparently normal and that between the lobules showed no appreciable increase. When this newly formed tissue is present between the acini and particularly when invading the Islands of Langerhans and its vessels, one can very readily see how the

secretion of these islands is interfered with and to what a less extent the constricted vessels are able to carry off the product of such islands. Age is supposed to have some influence in the formation of this sclerosis, yet in both our cases representing a difference of twenty years between the two, there was no apparent change.

Infiltration of fat into the pancreatic stroma has been observed in some cases. In ours, none was found.

Arteriosclerosis, which you know to be a rather frequent finding even clinically, and which is probably accountable for the gangrene which at times accompanies diabetes, failed to present itself in one of our cases, and in the other only to a very slight degree, and peculiarly too, in the younger of the two men, although the older man had an abscess in the lumbar region, and the younger one a slight pneumonia, not recognized till post-mortem. These conditions are probably accounted for by resistance of the tissues in diabetes to bacterial invasion.

Changes in the Glandular Acini: This may be briefly summed up as compression and a resulting atrophy. Such an acinus is smaller than the normal and the cells poorly defined and in some cases destroyed. Those that are obliterated, have their places taken up by connective tissue. In contra-distinction to these atrophied acini however, Cecil has observed others of a hypertrophied nature, which he suggests might possibly be of a compensatory character.

The acini in both our cases showed no degeneration, atrophy, hypertrophy or sclerosis, and in every respect seemed normal.

Changes in the Islands of Langerhans: It is in these islands where the most significant changes have occurred. Sclerosis is the most common find, the islands being distorted, compressed and their places occupied by fibrous tissue. Their capillaries have also taken on a fibrous change, the walls of which are very much increased in thickness, which naturally interferes with the nutrition and proper functioning of the islands.

Hyaline degeneration of the islands is next in frequency and it usually occurs in association with the sclerotic condition, except when every structure has been so thoroughly invaded by the hyaline material, that all histological structure is lost. Ordinarily, the hyaline condition at first affects the islands, it being deposited along the capillaries and separating them from

the cells, and later in some instances, almost replacing the entire cell structure by its presence.

Hypertrophy of the islands exists in a certain number of cases. By means of a micrometer, we determined that the islands in both of our cases averaged about one-hundred-fifty to two-hundred-fifty microns in diameter, the normal size being given as one-hundred to four-hundred microns.

Other than the slight diminution in size, our islands were comparatively normal. Neither hyaline degeneration nor sclerosis. The only fact that impressed us as having some possible significance, was the diminution in the number of islands in both specimens. This fact seems to have received the attention of more than one observer and is explained as being due to congenital defect.

Conclusion.—Two cases of undoubted diabetes mellitus, probably pancreatic, and possibly by a mere coincidence, showing almost identical findings exhibited no pathological change, other than a diminution in the size of both organs, with a scarcity of the Islands of Langerhans. Despite this we still continue in the thought that diabetes mellitus for the most part is the result of some lesion or lesions of the pancreas, and in our two cases only exhibited by atrophy; but a condition of too frequent occurrence to be ignored entirely. To refer again to Cecil's article, eighty-eight per cent. showed definite lesions in the Islands of Langerhans, while of eleven cases described as normal, four exhibited a marked diminution in the number of islands, and in two other cases the pancreas was abnormally small. With such evidence and with a further investigation on our part, we hope to present you with something more definite in the way of proof as to the cause of that complex of symptoms known as diabetes mellitus.

In closing, I thank Dr. S. W. Sappington for both cases, and also for his kind assistance in the examination of both specimens.

A NEW HÆMOSTATIC, IODINE-CHLOROFORM.—Gomoiu (Bucharest) found in a case of bleeding, inoperable epithelioma of the external genitals, that a solution of 3 gms. of iodine in 30 gms. chloroform acted remarkably well when locally applied even after other hæmostatics had failed. Neither iodine nor chloroform alone seemed to possess this hæmostatic action, but the writer thinks that it is probably that there is some special combination of the two substances which does possess the effect observed.—*Abstr. Zentralbl. f. Gyn.* 1909, 1722.

THE TREATMENT OF DIARRHŒA IN CHILDREN WITH INDICATIONS FOR THE MORE IMPORTANT REMEDIES.

BY

WM. H. YEAGER, M. D., PHILADELPHIA, PA.

(Notes of a lecture on Therapeutics delivered to the Senior Class in the Hahnemann Medical College and Hospital, Philadelphia.)

THE term "Diarrhœa" is here used to cover all conditions attended by frequent loose evacuations of the bowels, and is the result of an increase in peristalsis and in the amount of intestinal secretions.

The importance of diarrhœal diseases in children can best be appreciated by studying the mortality statistics of this disease in children under two years as compared with that from certain other infectious diseases for all ages.

DEATHS IN NEW YORK CITY FOR FIVE YEARS.

	1900	1901	1902	1903	1904	Totals
Measles, all ages	816	449	710	508	895	3378
Scarlet fever, all ages	465	1162	940	734	851	4152
Pertussis, all ages	584	289	606	324	197	2000
Typhoid, all ages	718	727	764	653	661	3523
Diphtheria, all ages	1920	2068	2015	2190	2084	10277
Total deaths from five diseases						23330
Diarrhœal diseases under two years	5744	5796	4938	4439	5646	26563

—Holt.

The next most striking fact about diarrhœal diseases is their prevalence during the summer time, as shown by the average mortality rate in New York City in ten years, arranged in months:

January 32	April 40	July 1247	October 172
February ... 29	May 66	August ... 621	November ... 55
March 36	June 410	September . 364	December ... 32

—Holt.

Realizing then the great importance of this dreadful condition in children I trust that you will bear with me if I go at some length into the treatment of these diseases.

First in importance for your consideration is the matter of prophylaxis. The health of the baby during the summer should be the first consideration of the parents, and if it can be afforded, the child should be taken out of the hot city and preferably to the seashore.

During the heat of the day the child should be kept in the coolest place available, and in the cool parts of the day should be given as much out of door life as possible. The clothing should be just enough to offer sufficient protection and no more. The sleeping apartment should be well ventilated.

The food should be most carefully watched. Ninety-seven per cent. of the babies who die of bowel troubles are bottle-fed. It is usually very easy to cure diarrhœa in a breast-fed child and very hard in a bottle-fed one.

The age and weight of the child should enable you to know the number of calories of food value the child should be given, and this should furnish you the index for your milk formulae.

The result of your prescription should be carefully noted. If the bowel movements are too loose, green and excoriating, you have too much sugar in your mixture; or else sugar can not be digested by the child.

If the child has colic and the stools contain large undigested curds of milk, you have not sufficient dilutant, or not the proper one.

Vomiting soon after feeding, of milk that is not sour, suggests too great bulk in the feedings.

Sour vomiting with undigested fat in the stool means too much cream; while obstinate constipation would call for additional fat of some kind.

The increase in the weight of the healthy child is the best guide to determine whether the food is sufficient in quality and quantity.

And, finally, I would have you remember that you cannot handle a child as you would a test-tube. The only true guide to success in feeding babies is the study of the individual child itself, and not some preconceived notion about some formulae that you consider mathematically correct.

"Cleanliness is next to Godliness" when caring for babies. The child should be frequently bathed. The bottles and nipples should be absolutely clean. The milk should be clean and pure and fresh.

When diarrhœa has developed we must at once discontinue the use of milk as a food. The milk proves too good a culture medium for the bacteria that are causing the trouble in the majority of instances. The curds of casein also act as an irritant to the mucous membrane and putrefactive changes occur in them.

If the baby is breast-fed an absolute withdrawal of the milk may not be necessary.

If vomiting is pronounced and continuous lavage is indicated.

If you have a case of simply intestinal indigestion to treat and the bowel movements are not satisfactory, you had best empty the bowels thoroughly and at once by a moderate dose of castor oil.

If you have a more serious case on hand, and the stools are not profuse but are undigested and foul and irritating, bowel irrigation is indicated. A normal salt solution should be used and a No. 20 soft rubber catheter should be inserted in the bowel for a distance of six or eight inches. While inserting the catheter the water should be allowed to run through it.

The result of the irrigation should be carefully noted, for while in the majority of cases it does a great deal of good when indicated, in others it is capable of prolonging the trouble by irritating the bowels.

The best substitute for milk in the very young child is albumen water, next arrow-root water, and in babies over three months old barley water should be given the preference. Toast water is also occasionally thought of.

These foods leave very little residue in the bowel and thus starve out the bacteria. Their exclusive use should be persisted in as long as the child's strength remains good, or until their appetite returns.

Lamb broth, white of egg, beef juice, clam broth, etc., are all of use in suitable cases.

A very cautious return to milk diet should be attempted only when convalescence is well established, and even then low percentages of fats, proteids and carbo-hydrates should be prescribed. It is just here that some of the proprietary foods have won their laurels.

High fever should be controlled by baths.

Collapsic symptoms call for stimulation. I have been pleased with the effect of hot alcoholic (25 per cent.) compresses applied constantly to the abdomen and inunctions of olive oil used twice daily to counteract the drying effect of the alcohol upon the skin. Brandy can be given in from 5 to 20 drop doses in water frequently repeated.

Heat should be constantly applied to these children if the temperature is sub-normal.

Hypodermoclysis is called for if the movements have been very profuse and very frequent, or if there has occurred a profuse hemorrhage. There will be, in these cases, extreme depression and the pulse thready or imperceptible.

We homœopathic physicians, I think, should be congratulated upon having at our disposal the homœopathic index of symptoms to enable us to select the curative drug for each baby brought to us for treatment. Other things being equal, this law of drug selection will give to you a tremendous advantage over those physicians who are obliged to grope in the dark for their remedy, or who prefer to use none.

I recommend, however, that you give the following drug indications very careful and close study, for unless you have thoroughly mastered the subject it will be valueless to you.

Aconite.—The first remedy that we turn to when we find we have on our hands the care of a baby suffering with a marked INFLAMMATION of the bowels.

There will be an ACUTE, sudden and violent INVASION of the child by the disease which will cause a marked RISE IN TEMPERATURE associated with great mental and physical RESTLESSNESS.

Oftentimes there will be a history of the child having been exposed to cold, or to getting wet, at other times the bowel inflammation will be a complication of some pre-existing acute disease.

Upon examining the little one we find the skin very dry and hot, and the temperature quite high. The pulse will be full, hard and quick.

The stools will be small and frequent and very green, like chopped grass, and associated with the stool will be considerable tenesmus which causes fear and restlessness.

Our aconite patient, however, will be a strong child and one making a good fight against disease, hence the VIOLENCE of the invasion.

Camphora stands out prominently in our materia medica as the opposite of aconite. Here the child has very little or no reactionary force, it makes a very poor fight, and is quickly overcome by the disease.

The attack will come on suddenly and will very quickly result in rapid sinking of all the vital forces as seen by the stupor and great prostration with a pale or livid face. The skin will

be cold and often covered with a cold sweat, the mouth and even the breath will be cold.

There may be vomiting and the stool involuntary. The color of the stool is often blackish.

Notwithstanding the icy-coldness of the body the little patient will not keep covered.

The pulse, as you can imagine in such a picture of collapse, will be very small and weak.

A condition like this developing LATE in the disease would make me think of carbo veg. perhaps.

The camphora should be given in drop doses of the tincture on sugar and should be frequently repeated until the desired reaction was evident. If the child could not be given the medicine on sugar I would give hypodermic injections of camphorated oil.

For such a state as this you would, of course, make a diagnosis of cholera-infantum and you would carefully differentiate camphor from such remedies as veratrum alb., arsenicum, zincum and apis. You cannot afford, at such a critical time, to make a mistake in the selection of your drug.

Belladonna—One of the most valuable remedies we possess for the treatment of children suffering with one of the more serious forms of diarrhœa (although often overlooked).

The two features that stand out prominently in the bell. case are, first, fever. Now much has already been said about bell. fever, and so I will briefly remind you of the full compressible pulse with throbbing carotids, the hot, steamy skin and general flushed, congested condition of the patient. The second feature is toxaemia. This spends its force upon the nervous system. The child is extremely sensitive and yet at the same time is very drowsy. It sleeps a great deal, but it is a broken sleep. It will start and cry in its sleep and roll its head from side to side and will waken often in a fright. Hyperaesthesia of all the senses will be noticed, convulsive movements, pupils dilated, and eyes staring and brilliant when patient is awake. The mouth and tongue are very dry.

Now, this picture is often seen in the beginning of serious bowel inflammations, especially in illeo-colitis, but bell. is valuable in the later stages as well, provided fever and toxaemia of this type remain present.

The condition of the bowels is of secondary importance to the general condition of the child in the bell. pathogenesis.

You would expect that the little one would have abdominal pain, the nerves are too hyper-sensitive in the bell. patient for it to escape pain. I can imagine that often when the child awakens suddenly so frightened it is due to one of those sharp colicky pains in the abdomen, we find the abdomen very sensitive and tender, and the transverse colon will at times become visible, like a pad stretched across the upper abdomen. This will be followed shortly by a bowel movement.

The stool is scanty and frequent, (aloes) and consists of thin, green mucous and bloody mucous (merc.) ; early in the disease it will contain lumps like chalk (calc., podo.), and at times you will notice that the child shudders during the stool. Now, do not consider this last statement of mine as of no value, as simply "a case of nerves," surely it is a nervous symptom and of no practical value from a pathological standpoint, but from a therapeutic standpoint it *is* of value as an indication for bell., and especially valuable because it does not indicate anything but bell. It is one of bell.'s peculiar symptoms.

Podophyllum is a remedy that is prescribed after a close study of the abdominal symptoms. It affects chiefly the duodenum, liver and rectum, and becomes a very valuable remedy for the milder diarrhœas of infants.

One of the great key-notes of podophyllum is painless stools (phos. ac., cinch). I do not mean by this that the podop. patient has no pain because colicky pain and soreness in the abdomen associated with a rumbling and rolling and gurgling of gas in the intestines is quite a feature of podo. As the stool passes, however, there is little or no pain.

Another feature is that the diarrhœa is always worse in the morning (aloes, sulph.) ; in fact later in the day you may have a normal movement.

The stool is more or less yellow (croton tig.), pasty or watery, undigested (china) and forcibly expelled (prot. tig., gamb.) ; often times it shows a meal-like sediment. As the disease progresses the stools may become more and more tinged with green or blood or slimy mucus—but when finally the yellow disappears entirely you had better find a closer simillimum than podo.

Thus, the remedy seems to me to fit those cases of INTESTINAL INDIGESTION which so often precede the more severe ulcerative illeo-colitis that simply await the advent of warm summer weather. Dentition also seems to help along the podo. diarrhœa.

Fermentation is always present in these cases and the gas becomes a troublesome feature (aloës).

Periodicity seems to figure in this pathogenesis. The each morning diarrhœa is one illustration. Diarrhœa followed by headache is another (bry.). Diarrhœa followed by constipation is still another (nux, sulph.).

There is a great sense of weakness in the rectum after the stool. In babies, in whom the intestines are so readily displaced, the bowel will often prolapse for several inches after one of these movements.

The weak sensations are not confined to the rectum, but involve the entire abdomen, and it is in these cases that the little abdominal binder is so grateful. Many of your grandmothers cured these intestinal indigestion cases with a flannel binder.

I can recommend podophyllum to you as a dependable remedy when indicated homœopathically. I have many times seen wonderful results from its use in very protracted cases that have been pronounced hopeless by our old school physicians. I have fallen into the habit of using the drug in the 2x dilution and increasing the number of drops in the half glass of water until I get the desired result. The alkaloid, podophylin, is preferred by some and used in the second or third trituration, one grain every two or three hours. Personally, I have never felt obliged to use it but would do so if the dilution failed me.

Chamomilla.—It is in the mental and emotional groups of symptoms that we find the most striking characteristics of chamomilla. The most marked thing about the child is PEEVISHNESS.

A constant WHINING RESTLESSNESS. Do not think for one moment that you can please a chamomilla sick baby, for your very best efforts and smiles will be repulsed. The mother is the only one who can quiet the baby, and even she must constantly pet it and CARRY IT ABOUT. It will whine for a toy one minute and throw it away the next—always impatient. You will meet many such babies (both young and old) before you are in practice many years.

Always remember this: "Mental calmness contra-indicates chamomilla."

A seriously sick baby does not behave like this, and clinically we find this remedy most valuable in the milder forms of bowel troubles. There is usually some colic, or perhaps some pain

from the eruption of a tooth and this makes the baby impatient and nasty. THEY ARE INTOLERANT OF PAIN.

Now, the stools under chamomilla will be green, very green, green as grass (ipecac, arg. nit.). It may have a chopped-up appearance like chopped spinach (acon.). At times the yellow of the normal stool will not entirely disappear (puls., podol., croton), and then we will have that mixture of bright yellow and dark green which looks like chopped spinach and eggs. The odor of the stool is described by the nurse as like that of a bad egg (sulph.). You will remember that odor from your laboratory experiments with sulphuretted hydrogen. The stools are more or less watery and will number perhaps seven or eight in a day. There may be some mucus with the stool. The anus may be sore, and the passage of the stool attended with colic and straining (merc.).

Ipecac.—I wish to warn you, gentlemen, first of all, that this remedy is calculated to disappoint you in the treatment of diarrhœas. Its symptomatology as given in most of our text-books would lead you to expect great things from the use of ipecac, but it is not nearly so generally useful as you might suppose. It must be very closely indicated in order to give you the hoped-for results.

Do not forget that the CHIEF ACTION of ipecac is found along the ramifications of the pneumo-gastric nerve. We would expect, therefore, that the child would have prominent gastric symptoms and such is certainly the case. That great key-note for ipecac, namely, constant *nausea* and perhaps some vomiting should be present if you are to place much confidence in the curative power of the drug over any particular disease. I also like to see a CLEAN TONGUE and much saliva in the mouth and throat.

I always look for a troublesome cough in these cases, a cough that sounds loose but is without expectoration, and this cough seems to produce nausea and gagging.

When these symptoms, referable to the stomach and chest, are present in a child suffering with diarrhœa I always feel that ipecac will work wonders for that child and therefore I try to corroborate my choice by examining into the character of the stool, etc.

Now, ipecac has a stool "as green as grass" (cham., argent. nit.) except when there is some hemorrhage and then it is "pitch-like" (ars., leptandria). There is no modification of

this coloring of the stools, the disease you must remember is high up in the duodenum or stomach, and so if there is bleeding it is never red as it passes out of the rectum; it has been changed in its passage through the bowels and appears pitch-like, or like black molasses. If there has been no hemorrhage then it appears very green. There is a GREAT DEAL OF MUCUS everywhere in the ipecac provings and we will find it in the stools. Frothy mucus.

There is a GRIPING PAIN AT THE NAVEL which the child will complain of if old enough to do so, otherwise you must surmise that symptom from the rigid body and the desire to stretch out stiff (*dioscorea*).

Croton Tig.—This is one of the great homœopathic remedies for diarrhœa. One of the surest ways of impressing this upon your mind is for you to take a drop of the tincture and see what happens to you. You will notice that its most marked action is upon the bowels. Should you take an overdose of ipecac you would find its action most pronounced upon the stomach. Hence, I say to you that *croton tig.* is a greater homœopathic remedy for diarrhœa than ipecac. This comparative study of drugs is most essential to successful prescribing. You must know the comparative value of symptoms, and learn just how much confidence to place in each of them.

If *croton tig.* is our remedy the diarrhœa is the most pronounced thing about our little patient. There will be a YELLOW STOOL. There may be a little green in it or it may be slightly brown, but on the whole you will call it a yellow stool. It is a PROFUSE, WATERY STOOL; some mucus will no doubt be present, but the diaper will be very wet and you will call it a watery stool.

The mother will tell you that the stool comes out like a shot. It is *forcibly expelled*. There is a sudden expulsion, so to speak, which is due, no doubt, to the presence of GAS (*calc. phos.*, *gamboge*).

The mother will also tell you that the baby's diarrhœa is WORSE AFTER DRINKING or nursing or eating (*aloes*, *china*) and you will notice that an exceptionally hot summer day will aggravate the symptoms.

It is quite common for a little nausea to be present, preceded by a little pain in the abdomen and always made worse when the child nurses.

Rheum.—One symptom always leads to the thought of this

drug, and that is SOURNESS of the stools and sourness of the whole body, though rheum is not the only remedy for sour stools, nor are sour stools the only indication for rheum. For sour stools, besides rheum, we have notably, calc. carb., mag. carb., and hepar sulph.

Characteristic among the symptoms for rheum, besides the sourness, is a griping colic often followed by tenesmus. In color the stools are often brown and frothy and worse from motion and after eating. Chilliness during the stool is also characteristic.

Magnesia Carbonica is said to follow rheum well, and besides the sourness it has the frothy, green, "frog-pond-scum stool." The child is also by this time very much debilitated, and the mal-nutrition is quickly becoming marasmus. You will find the milk-curds passing undigested in the stools. You will frequently notice in these cases a disposition to the formation of a number of boils in various parts of the body.

Calcaria Carbonica.—You will notice a great many children who are making a very poor start in this world of strife. There seems to be something wrong with their make-up. Some deep-seated fault which modifies their development in every direction. Impaired or faulty nutrition seems to be the key-note of their troubles. In just such conditions calc. is perhaps more often indicated than any other one drug.

The calc. baby to the careless observer looks fat and well-nourished, but by the close observer will be seen a flabbiness of the tissues, an undue paleness of the skin, a chalky look where there is no false flush. You will also notice that the abdomen is unduly large and that the head is large and out of proportion to the neck.

Such children will have a marked tendency to both local and general perspiration especially about their large square head. The pillow will be wet with sweat when they sleep, the forehead will be covered with beads of perspiration when they nurse, their stockings will always be wet or damp at night when the little shoes are removed. The hands will feel moist and clammy to your touch.

Many times you will find an enlargement of some of the glands about the body, especially the sub-maxillary.

There will be very slow bony development in the calc. child. The fontonells will remain open for a very long time. The teeth will be very much delayed and their eruption attended by

very serious symptoms of one kind or another. The long bones remain soft and will not bear the weight of the child when he should be able to walk. The flat bones become nodular at the epiphysis.

The child is very sensitive to cold. Takes cold easily. When sick has easy relapses. It is hard to get these sick children well without a few doses of calc.

Now, calc. strikes at the root of all this trouble and so alters the nutrition of the body that one by one these defects disappear and thus we are often able to stop a retrograde course that would result in a life of invalidism or death.

As might be expected, an infant of this type will have plenty of trouble with its bowels and diarrhœa soon becomes an old story. The bowel symptoms produced in the provers are very few, but the drug, when prescribed on the general symptoms, will and has cured many a chronic diarrhœa.

There are two facts in connection with the calc. diarrhœa that I wish you to remember. The first is that the stools contain undigested food. Whitish stools. Stools containing chalk-like substances. Stools containing undigested milk curds. The second fact is that the stools have a sour odor.

Sometimes there is vomiting of undigested, sour, curded milk.

I would have you remember calc. for these cases as a constitutional medicine. I do not believe that it has a place in the very active and feverish diseased conditions of the bowels, but rather in the chronic, torpid troubles, when you feel that the child should get well but does not do so on account of the existing dyscrasia.

Calcareæ Phosphorica.—The phosphate of lime is a further reaching remedy than the carbonate—although the same tissues are affected. In calc. phos. the child has been damaged to a greater extent. They are most often dark complected youngsters, or at least in their emaciated condition the skin has a dusky, dirty look. There has been a disease present which has produced a chronic wasting of the tissues, so that the baby is very thin, the bones stand out prominently, and the skin, which is loose, seems to hang upon them in folds and gives the child an old, withered look.

There is greater glandular enlargement, but not so much sweat, the skin may feel dry and harsh, as if the circulation in the superficial capillaries was almost nil.

The abdomen instead of being large and rotund as in calc. carb. is concaved or sunken until you can readily feel the lumbar vertebra through the abdomen upon palpation.

Now, the baby is constantly hungry and wants to nurse, but it vomits most of its food. It looks hungry, indeed it looks starved, and so it is. The nursing also produces colic and the feeble starved cry of the baby is very pitiful to see and hear.

The stools suggest the presence of a sub-acute or chronic ulcerative illeo colitis. There may be a low grade fever present and frequent bowel movements. The stool being green and slimy and hot, and forcibly expelled with a splutter. This latter symptom is very constantly present in the calc. phos. cases and is one of the characteristic indications. The stool is undigested, it contains milk curds, and both the stool and flatus, which is abundant, is fetid.

I have frequently seen calc. phos. reach children as sick as this and bring about a complete recovery. Can I recommend it to you in higher terms than this? Surely, any drug that has such curative powers, any measure within the grasp of the physician that can reach down and snatch a baby from the very clutches of death, is worthy of his utmost consideration.

Sulphur is another remedy that is prescribed most often upon a constitutional basis; that is to say, we are governed to a large degree by the peculiar make-up of the individual when selecting sulphur as a curative remedy.

Perhaps the most marked thing about the sulph. patient, as you know, is the UNHEALTHY CONDITION OF THE SKIN, the skin looks greasy and dirty and the muco-cutaneous junctions, as the lips, etc., are very red. You will notice EBULLITIONS OF HEAT and redness to the surface of the body, and the patient, if old enough, will complain of a sense of BURNING. The scalp is dry, and the hair is dry and brittle and falls out. You will usually find in your sulph. patient some skin lesions. WATER AGGRAVATES this skin condition, hence the little one does not enjoy its bath, indeed it dreads the water, and will cry whenever it suspects you intend any cleansing procedures.

There is a GENERAL FEEBLENESS in the tone of the baby, a kind of relaxation of fibre.

The sleep is frequently broken. The mother will say that the baby takes "cat-naps" instead of a sound, refreshing sleep.

THE STOOLS in the sulph. patient are first of all OFFENSIVE. The odor CLINGS ABOUT THE CHILD for a long while—even

though it was carefully cleansed and the diaper removed. You will notice that the muco-cutaneous margin about the anus is very red, not so much an excoriation from the stools as it is an unhealthy condition of the tissues themselves.

The stools are especially frequent during the latter part of the night or in the early morning.

The stools may be most any color common to this condition, but often green or greenish yellow, and usually semi-solid or pasty and may or may not contain blood.

When sulph. is prescribed on a constitutional basis, or to clear up lingering symptoms in a sulph. patient, I recommend to you the thirtieth centesimal dilution. Give three doses an hour apart and then placebo for several days. I am sure you will be pleased with the results if you will but try this dosage.

For the more acute bowel conditions I would prescribe sulph. in the sixth decimal dilution—a dose every two or three hours.

Aethusa Cynapium.—In sick babies this drug is indicated when there is present a marked intolerance of milk. It is vomited as soon as swallowed, in large curds. Vomiting is very marked in *aethusa*. The vomiting is sudden and projectile in character and is often associated with sweat and followed by great weakness. The child is in a dreadful condition of debility and emaciation, because you have been trying for weeks and months to find a food that will agree but you have not been very successful. Anything with milk in it seems to be poison to the child, and so you have been tossed about from pillar to post, but you have not thought of giving the baby a little *aethusa* perhaps.

There are colicky pains in the abdomen and the stools are frequent, UNDIGESTED, thin, and greenish and are followed by exhaustion and drowsiness.

The temperature in these children is apt to run sub-normal.

Arsenicum Alb. suits two classes of cases.

The first would be diagnosed cholera-infantum or acute milk infection with the sudden development of a state of collapse. The symptomatic indications here would be cool skin—face pale as death, pulse thready, and yet in spite of this condition extreme restlessness would be marked. Unquenchable thirst for small quantities of water. Vomiting and purging and watery, offensive stools.

The second class of cases would be less acute. Here you might observe high fever with progressive emaciation and prostration and the development of a well marked anaemia.

VOMITING is a marked feature here, but it is not the forcible vomiting of aethusa. The patient can only retain small quantities, and if any bulk gets into the stomach it is vomited. The vomiting and the bowel movements are both followed by marked prostration.

RESTLESSNESS is always present, in spite of the patient's condition, when arsenic is indicated; and all the symptoms are worse at night.

Oedema may be present, due to the anemia or a complicating nephritic condition.

The stools under arsenic are usually small and frequent.

They are invariably offensive and may be bloody.

They are attended with much prostration and are worse at night.

Apis Mcl. is a drug whose value has not been generally appreciated. It suits those very bad cases of bowel inflammation where head symptoms are marked. These are usually considered very grave, and yet in a series of six cases treated by me recently with this drug every one has recovered.

The symptoms suggest a hydrocephaloid condition. From the very start apathy or indifference marks the case as bad. This may be followed by unconsciousness. If you arouse the baby it will whine for a bit and then lapse into unconsciousness.

Sometimes there will be rolling of the head or boring of the head into the pillow and this is usually associated with sudden, shrill, piercing screams.

Oedema may be noticed about the face or ankles. The skin is hot and very pale (waxy). The tongue is very dry and the patient thirstless. Very little urine will be passed.

The abdomen is at times sensitive to pressure and palpation will cause whining.

The stools are involuntary. The anus seems to be wide open and the fecal matter oozes out. It is watery, yellow or bloody and passed without pain, and is more frequent in the afternoon.

Argentum Nit.—Diarrhœa is undoubtedly caused by sugar indigestion.

It is seen in babies who are breast-fed when the mother is too fond of candy.

It is also seen in the cases where too much sugar is in the milk mixture that is fed to the baby from the bottle.

Sugar indigestion results in the formation of gas; hence the little stomach will be enormously distended and the little one

will be in great pain. There will be ineffectual efforts at eructation until the nurse assists the child by the application of heat, or the administration of hot fennel seed tea, etc., and then there will be loud belching with relief of the pain.

There will be considerable colic from flatulent distention of the abdomen and this will be relieved by the expulsion of a watery, noisy, flatulent stool.

Upon examination the stool will be found to be very green—dark green—like chopped spinach. The buttocks may be excoriated.

The stools are very frequent and the mother will say that fluids seem to go right through the child.

The argentinum nit. must be freshly made for each case, and preferably made in a watery solution, and given in the sixth decimal or thirtieth centesimal dilution.

Mercurius.—If I have a mercury case with severe bowel symptoms, with great tenesmus which involves both the bowel and the bladder and the passage of bloody stools, I use the *mercurius corrosivus*.

If it is not such a severe case, but one where straining at stool is pronounced, “a never get done” condition, and if the stools are slimy and full of mucus, I use the *mercurius solubilis*.

If I have a mercury case that is mild and the stools are green and not so markedly painful I prefer the *mercurius dulcis*.

Now, the mercury patient is continuously hungry, but it is troubled with weak digestion and the taking of food is followed by hiccough and regurgitation.

The tongue is heavily coated and marked by the teeth. The gums may be sore and swollen and the saliva in the mouth abundant, due to the cutting of teeth. The breath will be offensive.

The child may have a moderate fever, and may be frequently noticed to sweat. It is a very uncomfortable child because the sweat, pain, excoriation, heat or cold makes it suffer in one way or another.

There is considerable pain in the abdomen, long-continued straining followed by a stool and this followed again by more straining—“a never get done condition.”

The stools may be greenish, slimy, or bloody, and are usually worse at night. A whitish-gray stool has often been noticed in mercury cases.

The buttocks are always excoriated.

EDITORIAL

THE ONE HUNDREDTH ANNIVERSARY OF THE PUBLICATION OF THE ORGANON.

THE *Organon* of Samuel Hahnemann has had more influence upon modern medical therapeutics than any one book ever written. A large body of scientific physicians acknowledge this fact with grateful pleasure, while those who deny it in words testify to it eloquently in their daily practice. It is, therefore, fitting that we, who have benefited so greatly by the life and works of this profound student of the medical art, should pause a moment to add our word of tribute to his genius on this, the one hundredth, anniversary of the publication of his greatest and most influential work, the "*Organon of Healing*."

It is unnecessary that we should here review the historic data relative to the work of Hahnemann and the publication of the *Organon*. We take pleasure in referring the reader to two very able and interesting addresses in the present issue of the *HAHNEMANNIAN MONTHLY*, one by Dr. Richard Haehl, of Stuttgart, Germany, and the other by Dr. Theodore Gramm, of Philadelphia, in which these matters are discussed in detail, and will well repay the time spent in reading them on the part of anyone interested in Hahnemann or in homœopathy.

To compare the *Organon* with the accepted standard medical works of the age in which it was written is an impossibility. Its profound reasoning, its constant appeal to observed facts rather than to the dicta of self-constituted authorities, and its tone of serious appreciation of the responsibilities of the physician in the practice of his art, place it in a class by itself and to say that in its pages Hahnemann produced a work at least one hundred years ahead of his day is under-estimating rather than over-estimating its character. If any one doubts this let him return to the therapeutic methods employed by the medical authorities of that day; let him blister, purge, bleed, cup and narcotize his patients, as they recommend, for a period of one month, and if he is not then convinced of the superiority of Hahnemann's methods he should destroy his medical

license and seek the shelter of the nearest institution for the feeble-minded that will receive him.

To compare the *Organon* with the most recent works of the leading physicians of our day were indeed a searching test of its worth. And yet such a comparison only goes to confirm our opinion of Hahnemann as an unusual genius and to reveal the wonderful stability of the truths which he announced. For example, as Dr. Haehl points out in his address, Hahnemann urged the enforcement of sanitary laws almost identical with those that the results of modern investigation have proven to be absolutely necessary to prevent the spread of infectious diseases. Long before Pasteur demonstrated that bacteria were the cause of the contagious diseases, Hahnemann declared that Asiatic cholera was caused by minute, invisible animate bodies which developed in the infected individual and were disseminated by him to others. He declared that the interests of the patient and of the art of medicine were best served by the administration of the single remedy; he urged the proving of drugs on human beings as the most accurate method of studying their effects; he discouraged the administration of nauseous and toxic doses; he insisted upon the importance of proper hygiene in the cure of the sick, and gave to the world a therapeutic principle that explains the curative action of all dynamically acting remedial agents and is the principle upon which is based all modern efforts to cure infectious diseases by means of serums and vaccines. Slowly but surely the unfolding of Nature's secrets has demonstrated the verity of Hahnemann's observations; reluctantly but steadily the opponents of homœopathy are abandoning the antagonistic attitude in which traditional prejudice has placed them, and we are fain to believe that before another decade has passed openminded physicians of all schools will unite in paying respect and honor to one of the most eminent physicians and one of the greatest thinkers of all times—Samuel Hahnemann.

SOME REASONS WHY THE INCOME OF THE MEDICAL PRACTITIONER IS DIMINISHING.

A GREAT deal has been written in the public press during the past year regarding the increased cost of living. It has been pretty conclusively shown that it costs from thirty to fifty per

cent. more to live to-day than it did a decade ago. There have been loud complaints, especially from the middle and laboring classes, against the combinations of capital commonly known as "Trusts," which it is claimed have been responsible for the increased cost of the necessities of life. These corporations, on the other hand, deny that they are responsible for the increased cost of food and other commodities, and also point to the fact that there has been a material increase in wages during the same period of time.

We do not pretend to say which is the right side of this controversy, but there are two facts, at least, which are admitted to be true by all, namely, that there has been a very material increase in the cost of living, and, secondly, that there has been a steady increase in wages in almost all occupations and trades.

Inquiry among physicians, however, reveals the astonishing fact that there has been practically no increase in the income of general medical practitioners, and, in fact, in a large proportion of cases we find that the income of doctors is not only relatively but actually less than it was a decade ago.

Few physicians seem to have business sense enough to realize that the fifty-cent office fee which they receive to-day has, in round numbers, only one-half the purchasing value of the same fee ten years ago; in other words, the doctor whose fees are the same to-day as they were ten or fifteen years ago is, relatively speaking, receiving only one-half, in actual purchasing value, of his former fee.

That no active effort has ever been made among practitioners of medicine to raise medical fees in proportion to the increase in the cost of living, as has been done by men in almost all other walks of life, seems almost incredible. It is true that an individual doctor here and there has raised his fees to something commensurate with his worth; but if there is to be any material improvement in this respect the movement must be a wide one and must be participated in by the vast majority of the members of the medical profession.

Someone has said that "doctors are the only people who work hard to destroy the demand for their own services." The immense strides that have been made in public sanitation and in preventive medicine bear testimony to the truth of this statement. In its effort to further public and private hygiene the medical profession is seeking to diminish or to do away with the demand for the services of physicians.

It may be said to their credit that physicians almost universally strive to further this end, and give their hearty co-operation and support to every measure that is taken to preserve public health. The extent to which modern sanitation has tended to decrease the income of many practitioners of medicine is realized by very few.

From the most ancient times up until twenty-five or thirty years ago the general medical practitioner derived a very large proportion of his income from the treatment of infectious diseases, such as typhoid fever, small-pox, diphtheria, scarlet fever, etc. To-day the income of the average physician from diseases of this type, especially in our large cities, is almost nil; thus cutting off from forty to fifty per cent. of the income of general medical practitioners. For example, a Philadelphia physician informed the editor that prior to three years ago he had, on an average, six cases of typhoid fever on his visiting list for at least eight months out of the year. Let us assume that the average case lasted about six weeks and that his fee for the treatment of such a case would ordinarily be about one hundred dollars. This would mean that he would have an income from this source of about four hundred dollars a month, or a minimum of thirty-two hundred dollars a year. He further stated that during the past year, consequent upon the installation of the new filtering plant by the city, he had only had two cases of typhoid fever during the entire year. In other words, this sanitary improvement had diminished his income about three thousand dollars.

It is commonly remarked among general practitioners in our large cities to-day that they derive practically no income at all from the treatment of diphtheria, small-pox, scarlet fever, etc. There are those, however, who say that, while all this is true, there has been a proportionate increase in chronic diseases of the heart, kidneys and nervous system, and that this compensates the medical man for his loss of work in other directions. Investigation of the facts, however, shows that this is not the case. Patients suffering from chronic diseases of the types above referred to are notoriously prone to go from doctor to doctor, and the vast majority of them sooner or later decide to try osteopathy, Christian Science, or some other form of entertainment that promises much and accomplishes little.

The problem as to how to off-set this exodus from the pale

of the medical profession is indeed a difficult one, and the solution—if there be one at all—lies in the medical practitioner devoting more attention to methods of treatment that are especially adapted to chronic diseases.

Another potent factor in driving patients to seek the aid of charlatans and quacks is the fact that it has been the custom during the past few years for a number of well-known medical men to issue statements in the lay press decrying the value of medical treatment and warning the people against the use of drugs in the treatment of disease. Perhaps the statements of Prof. Osler have attained the widest notoriety, and whatever may have been his intention in making them, there is no question but that they have done a great deal to discredit the value of medical treatment in the eyes of the laity.

We note in a contemporary journal that Dr. Woods Hutchinson, of New York, widely known as a writer of medical articles for popular magazines, recently stated at a meeting of the Press Club in Chicago that drugs are absolutely useless; that to take medicines into the stomach with the expectation that these things would modify the course of disease was an anachronism; and it was hinted that physicians of the better class no longer believe in internal medication. Dr. Hutchinson went on to say that the physician would do better to try and show men and women how to live; to teach them the value of fresh air and exercise; and if they become sick, instruct them as to how to best conform their lives to their disease.

There is much sound advice in these remarks of Dr. Hutchinson, and we do not question but that he was influenced by the most laudable motives in making these statements. There is also much in it that is untrue and that is certain to do an incalculable amount of harm both to the public and to the medical profession. The impression left with this group of newspaper men, to be disseminated all over the world, undoubtedly was that there is nothing in medicine, and that the physician who uses drugs in the treatment of disease is either ignorant or is endeavoring to deceive his patients for the purpose of increasing his own income. Dr. Hutchinson had a perfect right to say that the method of administering drugs which *he* had been accustomed to employ was attended by no good results; but to make the statement that the administration of medicines in general was useless or harmful was entirely unwarranted. We question very seriously, for example, whether Dr. Hutch-

inson has ever administered drugs in accordance with the principle of homœopathy, and if such is the case, he was entirely unwarranted in making the statement that he did. As a matter of fact, we do not believe that his remarks accurately portray the sentiment even of his own school of medicine, for despite the abuses of medical treatment among the old school practitioners, we would not be bold enough to say that there was nothing of any value at all in their system of medicinal therapeutics.

We heartily concur with the views expressed by the editor of the *American Journal of Clinical Medicine* that "it is such addresses as these, coming from prominent men in our own midst, that crowd the waiting-room of quacks and fill the gilded temples of the healing sect; it is talk of this kind which discredits the doctor and makes him poor."

Despite the advances of preventive medicine, we have not reached the day when all disease and suffering has been banished from the face of the earth, nor in all human probability are we likely to reach it until the millennium arrives; and as long as there are sick men and women they will demand from the medical profession relief from their suffering and cure of their diseases. If the medical profession declares its inability to help them they are fully justified in seeking help elsewhere.

THE STATUS OF THE TRAINED NURSE.

A VERY bitter attack has recently been made by a prominent physician on the nurses who have registered in Pennsylvania under the law that was passed at the last session of the Legislature.

The writer contends that since the state has given nurses, who have received proper training and have passed the required examination, the right to use the title of "Registered Nurse," the nurses have endeavored to form a monopoly for the purpose of raising their fees and have attempted to place themselves on an equal authority in the sick-room with physicians.

It seems to us that this attack is entirely unwarranted. There are, no doubt, individual cases in which nurses have endeavored to assume undue importance, and have attempted to

collect extortionate fees for their services. The faults of the few, however, should not be laid upon all, and after a rather wide experience with trained nurses, we do not hesitate to say that as a body they are conscientious and faithful in their attention to the sick, and can be relied upon to faithfully carry out the directions of the physician. Should they be otherwise, the physician has within his hands the power to remedy the matter whenever he may desire by discharging the nurse; and if he continues to permit an incompetent or interfering nurse to stay on a case, it is, as a rule, his own fault.

As to the question of fees, we believe that the nurse earns all she receives, and it seems very poor policy for a class of men who are as poorly paid for their services as physicians to attempt to infuse into the minds of the public the idea that the services rendered by nurses in caring for the sick are worth less than is generally supposed.

We are firmly convinced that there is a great field for unregistered nurses who are competent to attend to ordinary cases of illness at a moderate fee. There is no reason why an intelligent and trustworthy woman should not be able to care for a large proportion of sick people without the necessity of having taken a three years' course in a hospital where her experience has largely been with surgical cases. The fact that there are registered nurses in no way prevents other young women from entering this field of work and of securing a profitable patronage. We believe that they should be encouraged, and also that those who have had the opportunity to thoroughly prepare themselves by a course of training in a hospital for the more difficult cases should receive the cordial support and encouragement of the medical profession.

A CORRECTION :—Line 34, page 281 of the April issue of the *HAHNEMANNIAN MONTHLY* should read "the result of mensuration" instead of "the result of menstruation."

GLEANINGS

THE REDUCTION OF TEMPERATURE IN CHILDREN WITHOUT THE AID OF DRUGS.—The most satisfactory antipyretic used for young children is cold, but this has its dangers. Nervous irritability is calmed down by means of the ice cap or sponging. The best method in managing a feverish child is to place an ice bag at the head and a hot water bag at the feet. This will equalize the circulation.

In order to cold sponge the child all the clothing should be removed and the child placed in a blanket. The sponging should be continued for twenty minutes.

Irrigation of the colon is of great importance in reducing the temperature. This permits the removal of products of intestinal decomposition, carries in fluid for the body and reduces the temperature. Rectal irrigation can be repeated every three hours if the indications warrant. The author strongly recommends these irrigations in typhoid fever.

Plenty of fresh air is a valuable adjunct in the management of feverish children. Placing the children in the open air for a few hours each day is advocated regardless of the age or the disease from which they may be suffering.—W. C. Holopeter, *Pediatrics*.

A NEW METHOD FOR THE DETECTION OF SEMINAL STAINS ON FABRICS.—Dr. Baecchi, of Modena (*Deutsche med. Wochenschr.*, No. 25, 1909), recommends a simple method of detecting spermatozoa in stains on clothing. It is easy to carry out, and has the advantage that only the spermatozoa are stained, the fabric remaining colorless. A thread or two of the suspected material is placed in a concentrated watery solution of acid fuchsin for 15 to 30 seconds, decolorized in HCl acid alcohol (10 to 30 seconds), then the material is placed in absolute alcohol for 15 to 20 seconds and afterwards teased out in zylol. The head of the spermatozoon is found to be deeply stained and the tail less intensely.—*Med. Rev. of Reviews*.

TREATMENT OF TUBERCULAR PERITONITIS BY MEANS OF X-RAYS.—Alaria and Rovere (*Arch. de Elec. Med.*) report having treated seven cases of tubercular peritonitis by means of x-rays. They claim one undoubted cure out of the seven cases. In one case there was a bad result on account of the generalization of the disease. In other cases there was no bad result if no good was accomplished. It was noticed that the treatment caused a slight and inconstant increase in leucocytosis. They think great care should be exercised in this method of treatment of tubercular peritonitis since its effects are so uncertain. They consider it in some cases positively curative not by destroying the bacilli, but by its stimulation of the

peritoneal cells. In the aseptic form they think it of use if used moderately with care, being stopped on the first symptom of danger.

This report is of special interest to the editor of this department, who has seen several cases of this condition. In fact, the first case of tuberculosis that he ever treated with the x-ray was one of tubercular peritonitis, well marked, and a gloomy prognosis was rendered by two prominent surgeons in consultation. This patient, who was in his sanatorium, heard the nurses talking of the relief a cancer patient was getting from his x-ray in cancer, and nothing else would do but it must be tried upon her stomach. To satisfy her it was done and the relief was so marked that it was used again and continued until she was well, and she is well to this day, nine years since.—*Charlotte Med. Journal*.

RENAL TUBERCULOSIS.—Saint-Jacques (*Le Journal de Medecine et de Chirurgie*) says that renal tuberculosis calls for nephrectomy in the absence of contra-indications. In regard to the clinical value of the finding of a typical bacillus in the urine, and the corroboration of its specific nature by inoculation into guinea-pigs, the author states that such finding does not necessarily indicate a lesion of any portion of the urinary tract. Such a finding may be due entirely to bacilluria. The dominant infection in such urine may be streptococi, staphylococi, the colon bacillus. However, there may be a true tubercle bacillus without any local tubercular lesions, and these tubercle bacteria may occur without albuminuria, and may be absent in the presence of distinct tubercular renal lesions.

As to the safety in nephrectomy, Blum is quoted to the effect that in 678 nephrectomies from renal tuberculosis there were 77 deaths, while of 26 cases treated medically 24 died.

In contrast to this Leedham-Green is quoted to the effect that three children, treated in the beginning of a renal tuberculosis which had been characterized by frequency of urination and urinary incontinence, and by albumin and Koch's bacilli in the urine, were cured by the use of tuberculin.—*Charlotte Med. Journal*.

TUBERCULIN.—Wilkinson, in a recent issue of the *London Practitioner*, says that two chief reasons are urged against the general use of tuberculin in diagnosis: (1) It is supposed that tuberculin may aggravate the condition. (2) Tuberculous lesions are so common in the healthy that a tuberculin reaction does not help the diagnosis. 1 The aggravation is due to the reckless use of tuberculin. Heedless of Koch's express limitations and restrictions, men were found ready and eager to inject tuberculin even into patients who at the best had but a few days to live. It will take years to undo the mischief of that reckless and insane misuse of a valuable remedy. Koch's warning was unheeded in the wild delirium of the moment. Koch stated that the remedy was especially valuable in the early stages of tuberculosis, and numerous witnesses vouch for the truth of Koch's statement that in such cases tuberculin is a most useful remedy. In early cases the benefit of tuberculin treatment had been demonstrated again and again; but in spite of treatment with the old tuberculin, the disease may relapse. Because the remedy has fallen short of popular expectations, it has been decried and condemned as useless and harmful. 2. Is

tuberculosis so common that the tuberculin test loses its value altogether as a diagnostic agent? This argument is much more solid and more difficult to dispose of, especially when we bear in mind that even a tuberculous lesion in man may be due to the bovine type of the tubercle bacillus and cause a reaction to tuberculin, although such a lesion has little or no tendency to progress in adult human beings. Now, if we accept the view, that at least pulmonary tuberculosis is not related to the bovine type of tubercle bacillus, and pulmonary tuberculosis represents eleven-twelfths of all the tuberculosis that occurs in man, we at once reduce this error to one in twelve. As far as observations in adults go, the great majority of tuberculous lesions outside of the lungs are due to the human type of bacillus. Thus the margin of error is still further reduced, though as yet we cannot fix accurately the degree of this reduction. So far as statistics help us, the bovine type does not appear in more than one-third of the lesions, other than those of pulmonary tuberculosis, even when the statistics have been drawn from cases in which special pains were taken to discover lesions that were more likely than others to yield the bacillus of the bovine type; and these cases were almost wholly children, not adults. Both the investigations of the German and English commissions, little as they may agree in other points, agree on this point, that even in young children the human type is more commonly found than the bovine type. Wilkinson concludes that tuberculin is invaluable in the early stages of pulmonary tuberculosis when the symptoms are related to other organs—heart and blood vessels and blood, digestive organs, especially the stomach, and even the muscles, nerves, bones, and joints—especially symptoms of the rheumatic type. The enormous improvement in the general health—gain in weight and especially gain in energy—and the complete disappearance of the rheumatic pains must profoundly impress any one who has witnessed the remarkable change from invalidism to first rate health. By using tuberculin we may correct the wrong diagnosis of those who trust to the superficial evidence of physical signs.—*Charlotte Med. Jour.*

ABSENCE OF IRITIS AND CHOROIDITIS AMONG SYPHILITICS WHO HAVE BECOME TABETIC.—In reference to iritis and choroiditis in syphilitics, Snydacker states that he has never seen either of these conditions in tabetics. On the other hand, he has never known a syphilitic to develop tabes after having had iritis or choroiditis. On examining the literature he found that Wernicke stated that: "Syphilitics who have suffered from specific iritis or choroiditis do not acquire tabes." And Wintersteiner having examined 1,000 paretics found optic nerve involvement in 28.5%, while uveal changes were present only in 5.62% of the cases. Compilation of various statistics showed that in 3,622 cases of eye diseases due to syphilis the uvea was involved 1,566 times and the optic nerve 887 times. In paresis, therefore, the optic nerve is afflicted five times as frequently as the uvea, while in syphilitic diseases of the eye the uvea was involved twice as often as the optic nerve. To account for these facts he advances the theory that tabes and paresis are not due directly to syphilis, but to the destructive action on the cord of unusually numerous antibodies. As iritis is essentially a secondary symptom of syphilis an excess of antibodies would tend to prevent the development of this process. Such a theory explains the

well known fact that in tabes and paresis the early symptoms of syphilis were very mild or even unrecognized in most cases; the excessive production of antibodies having prevented the development of severe secondary manifestations. Further observations on the incidence of uveal changes in paresis and tabes may enable us to assure syphilitics who have or who have had iritis that they will escape tabes and paresis.—*Jour. of the A. M. M.*, March 19, 1910.

CHARLES D. FOX, M. D.

EXPERIMENTAL EPIDEMIC POLIOMYELITIS IN MONKEYS.—It is possible to transmit poliomyelitis from one monkey to another by means of applying to the scarified mucous membrane of the nose and pharynx an emulsion of the spinal cord of a monkey that had had the disease. Several days in advance of the appearance of symptoms of poliomyelitis the cerebro-spinal fluid of a monkey is infectious. By intracerebral injection of a preparation of a mesenteric lymph node from a case of human poliomyelitis it was possible to transmit the disease to a monkey.—Flexner and Lewis, *Jour. of the A. M. A.*, April 2, 1910.

CHARLES D. FOX, M. D.

ETHER: AN ANTIDOTE OF COCAINE AND STOVAIN POISONING.—In the treatment of cocaine poisoning Engstad found ether to be extremely valuable, and he remarks that it has saved what seemed hopeless cases. It is important that the anæsthetic be given by the drop method; otherwise it would only increase the danger of asphyxia. The induction of primary surgical anæsthesia is sufficient to cause rapid disappearance of the toxic symptoms.—*Jour. of the A. M. A.*, March 19, 1910.

CHARLES D. FOX, M. D.

PARALYSIS FOLLOWING RELAPSES AND SECOND ATTACKS OF DIPHTHERIA.—Of 1,600 completed cases of diphtheria Rolleston found relapses occurred in 27 cases—1.6%—before the patients were discharged from the hospital. Not any of these cases had any signs of paralysis after the primary attack. In 36—2.2%—of the 1,600 cases second attacks occurred after the patients were discharged from the hospital. The interval ranged from 3 months to 14 years, but the majority of these second attacks developed during the first three years. The records of 18 of these cases were available. Post-diphtheretic paralysis developed after both attacks in one case, after the first attack alone in one instance, and in three cases the paralysis appeared only after the second attack. The greater frequency of post-diphtheretic paralysis since the introduction of antitoxin is due to the fact that many of the severe cases that formerly would have died early in the course of the disease now survive to develop paralysis. The author's table shows, however, that regardless of the severity of the attack of diphtheria the earlier that anti-toxin is administered the less frequent becomes the incidence of post-diphtheretic paralysis. For instance, if serum therapy is begun on the first day, 4.8% of the cases developed paralysis, while if this treatment is delayed until the fifth day, the percentage rises to 31.7%.—*Jour. of Nervous and Mental Disease*, March, 1910, p. 164.

CHARLES D. FOX, M. D.

DISCUSSION ON THE DISEASE OF THE LYMPHOID TISSUE OF THE CONJUNCTIVA.—This is a very thorough and exhaustive discussion of trachoma and is divided into a number of heads. The contagious character is definitely established, and there can be little doubt that the contagious element is some micro-organism. The trachoma bodies of Prowazek and Greeff are mentioned, but nothing definite with regard to their importance is stated. The contagion is not transmitted through the air, but in some moist discharge. The adenoid layer of the conjunctiva is the chief seat of the disease. The trachoma organism appears to be a non-pyogenic one, the reaction which is excited by its toxin being an immense new formation of lymphoid tissue, a large increase of the plasma cells, and in the latter stages a formation of fibroblasts. In the treatment there are three ways in which the follicle disappear and all methods are derived from these principles; first, by rupture of the follicle; second, by intercurrent inflammation and absorption, and third, by the replacement of the adenoid layer by fibrous tissue, which causes an atrophy of the follicle through cutting off its circulation.

Expression is a satisfactory mode of treatment. Galezowski's method of excision of the retro-tarsal fold has also given good results. The author has never seen a case which, in his opinion, was severe enough to justify the Kuhnt operation. The methods of cataphoresis, destruction by x-ray, and radium are discussed. The conditions which may produce the non-trachomatous follicle are, first, atropine and eserine irritation; adenoid tendency in children, and third, muco-purulent ophthalmia.—E. Treacher Collins, *Annals of Ophthalmol.*

WILLIAM SPENCER, M. D.

CONTRIBUTION TO THE QUESTION OF THE ETIOLOGIC FACTOR OF TRACHOMA.—The author made a number of microscopic examinations in cases of fresh, non-treated trachoma, treated trachoma and in trachoma with scar tissue, using as a control 25 cases of non-trachomatous conjunctiva. In this latter class three cases with normal conjunctiva, conjunctiva affected with acute and chronic catarrh, also follicular and spring catarrh, eczema and tuberculosis. All of the preparations were stained with modified Giesma stain, as suggested by Greeff. The trachoma bodies were found solely in the trachomatous cases, and were much more numerous in the acute cases and those that had not been previously treated.

The trachoma bodies were of various shapes and were usually in contact with the nucleus in the shape of a close-fitting cap. In old, seared trachoma cases and conjunctiva not effected with trachoma these bodies were never found.

A description of the differential diagnosis between these trachoma bodies or chlamydozoen, as Prowazek calls them is hardly possible, but the author believes that any one who has once seen and followed the various stages of the trachoma bodies will never mistake them for anything else.—Ernest Werner, Marburg, *Annals of Ophthalmol.*

WILLIAM SPENCER, M. D.

AUTOINFECTION.—In considering this subject Schmidt (Halle) says the modern theory of puerperal infection has made progress in that the rule is

followed as strictly as possible, to distinguish the germs of putrefaction from the virulent micro-organism. In their clinic they have recognized that the main germs involved in puerperal fever are virulent streptococci, which are hæmolytic and react to the coagulum as described by Fromme. Of course it is known that other germs may cause fever in the puerperium, but a really serious form of illness is usually caused by virulent streptococci. The source of these germs is not yet known. To trace them and thereby to forestall the fever is a difficult task. The question of interest to scientific obstetricians whether some cases of puerperal fever arise from autoinfection or from without will be made easy by observing the significance of virulent streptococci. If we examine the question how we shall decide whether in a given case the fever arose from germs already present or which the examining finger introduced, we will only need to examine the vaginal germs whether or not they are hæmolytic or not and show the other reaction above named. Schmidt has observed hæmolytic streptococci present in 7% of pregnant women, and in 68% of puerperæ. It is likely that hæmolytic streptococci are present during pregnancy more frequently, probably almost as frequently as in the puerperium; only they escape recognition, because they occur in smaller numbers. Fever in the puerperal period not induced by streptococci but by other germs, is possible. The avirulent hæmolytic streptococci certainly do not more often cause rise of temperature than the other germs. The febrile puerperæ without hæmolytic streptococci usually have fever for only one day in the latter part of the puerperium, sixth to the eighth day. Febrile puerperæ with hæmolytic streptococci have fever on several days of the lying in period, third to the fifth day. Autoinfection from avirulent hæmolytic streptococci present before labor is unlikely. Virulent germs were never found before labor. From all of the work reported, the author says we do not yet know the source of puerperal fever, because in none of the 100 cases examined could he trace the virulent streptococci. Since he believes that virulent streptococci are the cause of puerperal fever, it will be necessary to make further studies of the genital secretion before labor, and to test them as to their virulence. If present, and fever later arises without the woman having been examined we may speak of autoinfection. It is certain that sapræmic fever may originate from the vaginal germs, but all cases of sapræmia do not thus come about. It is certain that gonococci are often present before labor, and fever caused by them is as a rule an autoinfection. Such an occurrence is not always an explanation of the infection by virulent micro-organisms. It is only true when these germs were present at the time of the labor.—*Arch. f. Gyn.* Vol. 89, 118.

THEODORE J. GRAMM, M. D.

ECLAMPSIA AND THE PARATHYROID GLANDS.—Seitz has written a most important article on this subject, based upon experiments and numerous examinations. A summary of his results is about as follows: The parathyroid glands during pregnancy show a pronounced succulence and an increased vascularity. The chromophile cells are increased in number and are better developed than in the nonpregnant.

2. In eclampsia the chromophile cells are fewer or have entirely vanished. This finding is to be regarded as a secondary process, having no relation to the genesis of eclampsia.

3. Other observed changes in the epithelial bodies in eclampsia are in part variations or exaggerated physiologic conditions, as for instances more pronounced development of the connective tissue, of the fat the appearance of colloid, partly represent pathologic processes as cyst formations, tuberculosis, but do not stand in any casual relation to eclampsia.

4. The absence of one or more epithelial bodies does not indicate an insufficiency of the function of the epithelial bodies; for without serial section examination the small bodies may easily escape observation, also there are often found far removed from the thyroid gland aberrant bodies and even in the connective and fatty tissue of the neck small masses of parathyroidal glands cells may be demonstrated.

5. Partial or total parathyroidectomy brings about in the animals even in the pregnant condition quite constantly a tetany but no eclampsia. The two clinical conditions sharply differentiated from each other must not be confused. The so-called eclampsia observed in animals, as for instance in the cow, is not identical with eclampsia in the human being; animal experiments are therefore not calculated to clear up this question.

6. Parathyroidin is not a specific remedy in eclampsia; not even symptomatically does it appear to influence the disease favorably.

The latter statement of the author, I am sure, some of us are not just ready to accept until experiments have been conducted starting from other therapeutic standpoints than those entertained by him.—*Arch. f. Gyn.* Vol. 89, 53.

THEODORE J. GRAMM, M. D.

APPENDICITIS COMPLICATING PREGNANCY.—Findley (Omaha) has found that pregnancy does not incite a primary attack of appendicitis, but recurrent attacks may be precipitated by pregnancy, labor, and the puerperium. Severe attacks may be confounded with puerperal infection of the uterus and its appendages. Mild attacks of appendicitis do not alter the course of pregnancy. Severe attacks commonly interrupt pregnancy and may lead to the death of the fetus either in utero or shortly after birth. Death of the fetus is ascribed to nonviability, toxæmia, and septicæmia. A woman in the childbearing period who has experienced one or more attacks of appendicitis should be operated because of the liability of a recurrent attack in the event of pregnancy. Mild cases do not demand operative intervention unless oft repeated in the course of pregnancy. Severe attacks should be operated without delay. When occurring near the end of the period of gestation, or in labor, the pregnancy should be speedily terminated, immediately after which the appendix should be removed. When an appendicial abscess has formed early drainage is imperative, in the fear that the contracting uterus which forms a part of the abscess wall may liberate the pus into the general peritoneal cavity. When operating in the course of pregnancy, every effort should be put forth to prevent miscarriage. Rest should be enjoined, opiates administered, and during the operation the uterus should be handled and exposed as little as possible.—*Amer. Jr. Obs.* Vol. LX, 993.

THEODORE J. GRAMM, M. D.

A NEW POINT IN DIAGNOSIS BETWEEN APPENDICITIS AND TUBAL DISEASES.—For more than a year MORRIS (New York) has been calling attention to a diagnostic point of value in differentiating between these two diseases. About an inch and a half to the right of the navel close down to the spinal column we find the right group of lumbar ganglia. Hypersensitiveness on deep pressure at this point seems to indicate that the appendix alone is the seat of irritation. When the left group of lumbar ganglia an inch and a half to the left of the navel also shows hypersensitiveness, we may look to the pelvis for the seat of irritation. We must divide appendicitis into four kinds. First, protective appendicitis is the commonest type. These will never have inflammation of an infective character, because the structures capable of infection are being constantly removed. The diagnostic point, above named, is of value here. If the pelvis is involved, both sides of the navel are sensitive. The second class constitutes intrinsic infective appendicitis. In this class the sign is of less importance, because there are more important which we recognize. Here sensitiveness at McBurney's point is of great diagnostic importance. In the third group is congestive appendicitis, where there are serous infiltrates in the tissues along with serous infiltrates in the vicinity. These cases are also protected against infection. The fourth class consists of cases of appendicitis with extrinsic infection in which the infection proceeds from the oviduct, peritoneum, or some neighboring structure, and so slowly that we do not have the incident of rapid swelling that occurs with intrinsic infection in which we have a rapid compression anæmia due to swelling of the soft inner coats within the tight outer sheath. In the attack of compression anæmia, the tissues are made temporarily vulnerable to attack by bowel bacteria. In the cases of extrinsic infection, however, the appendix shows slow tissue changes, and a protective leukocytosis goes on in such a way that we do not frequently have to deal with the accidents belonging to intrinsic infection. The diagnostic sign above mentioned is not of much value in these cases, for the appendix feature is very apt to be associated with pelvic trouble; therefore we are apt to have both groups of lumbar ganglia hypersensitive. The sign is, however, of the greatest value in the commonest class of cases namely protective appendicitis, and in the class of cases in which there is most often a question if we have disease of the oviducts or of other structures.—*Amer. Jr. Obs.* Vol. LX, 870.

THEODORE J. GRAMM, M. D.

IODIZED CATGUT.—Whiteford (Plymouth) has found that catgut prepared by immersion in a solution containing one part of tincture of iodine in fifteen parts of 50% alcohol, is even better than when prepared according to the formula proposed by Claudius where water instead of alcohol is used. Catgut prepared as above mentioned will be found to be reliably sterile; resistant and elastic; easily prepared and cheap; completely but not too easily absorbable; and it will not be injured no matter how long it remain in the solution.—*Abstr Zentralbl. f. Gyn.*, 1909, 1721.

THEODORE J. GRAMM, M. D.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY A. LEIGHT MONROE,

Miami, Florida.

PICRIC ACID IN DIABETES.—An elderly gentleman, belonging to the legal profession, of fair color and robust frame, had been suffering from diabetes for a long time and was under allopathic treatment all along. This gave him occasional relief but no cure was effected.

For the last few years he had been losing flesh and became prostrated, especially after bodily and mental labor. He was requested by friends and relatives to try homœopathy which he resolutely refused. At last he was prevailed upon and I was called to see him. He had about 25 grains of sugar in the urine and the specific gravity was 1040. He passed about from 80 to 100 ounces of urine in four and twenty hours. More urine at night and in cloudy and rainy days. After office hours he seemed utterly exhausted but after some rest he felt better. Appetite voracious and much thirst for cold water.

Among others, following symptoms were noticeable—pale and waxy and jaundiced face, especially after day's work. Buzzing and whistling in ears, sparks before the eyes, dullness of head and inability to think or for mental work, studies upset him and produced profound prostration and vertigo. Sexual power was reduced though there was nightly excitement. Hazy vision before the eyes, burning sensation in eyes, face, palm and sole. Fatigue after least exertion. Motion aggravated and rest in bed ameliorated all these symptoms. He was given all kinds of tonics, and gold mixtures and codia pills were his favorite remedies. I tried phosphoric acid which gave him temporary relief. His various engagements, both private and public, precluded him from his taking rest. Relapses were the consequent result. Calc. phos. and carbonica were tried with occasional good results but no perfect cure. Calc. phos had on one occasion reduced his sugar to 596 per ounce and specific gravity to 1025.

The last medicine I gave was picric acid 30 which did wonderful good. In fact this remedy cured thoroughly for the last six years. He had no trace of sugar in his urine and he is now working in his profession as a young man without that kind of prostration and brain fog. Picric acid had been used off and on for a long time. I did not change his usual food during my treatment.—*Indian Homœopathic Review*. (*North American Journal of Homœopathy*, Feb., 1910.)

ARSENICUM.—It is said that psychic phenomena like the wind, the waves or prairie fires sweep whole sections, exhibiting a sort of hypnotic epidemic tendency. We have epidemics of suicide and matrimony, bicycle

crazes, &c. Some occult influence seems to have turned the attention of a great many able homœopathic writers recently to Arsenicum Album. The April number of the *Century* contains long and valuable articles by Drs. H. C. Morrow, of Austin, Texas, and Dr. R. Del Mas, of Centreville, Minn., the latter containing the following striking picture of the arsenic patient:

It should never be forgotten that Arsenicum is a "keenly feeler," a "walking sensitive," very weak and irritable, very chilly and anxious, very restless and fearful, very sad and hopeless; that he dreads exertion of any kind; that any slight paroxysmal pain renders him chilly and feverish, weak and trembling, sad and restless. He fears death; he fears hell; he fears when alone, in the dark; he fears imaginary troubles. His nerves are "gone;" his heart also; his hopes have vanished in a horizon dark and threatening. He is worse in the cold, at 12 a. m. and 12 p. m. He is sour, acrid, pungent, offensive. He is "living death."

Further along in the same number in the "Pharmacodynamics and Therapeutics" column of Dr. Wm. Boericke, rapidly becoming a valuable feature of this journal, appears the following:

Arsenic has become a great blood tonic with the old school. But they have no special indications for it except as Bartholomew says it is one of the most valuable agents in the treatment of chlorosis and anæmia, especially adapted to those cases in which iron does not agree or fails to effect. But homœopathy cannot possibly confound the two remedies.

The excessive prostration, the considerable œdema, violent and irregular palpitations, marked craving for stimulants and acids, especially brandy, and above all extreme anxiety, restlessness. Tendency to menorrhagia.

A high degree of debility, excessive irritability, œdematous paleness, cardiac phenomena, even during rest and complete collapse of stomach. If poverty of blood has arisen from miasmatic or exhausting toxæmic disease, so much the more certain. Progressive, pernicious anæmia with fever, œdema, petechiæ, effusion characterize both.

Arsenic is the remedy for rapid, excessive prostration with sinking of the vital forces, marked craving hence for stimulants. There is emaciation, violent and irregular palpitation, extreme restlessness, coldness or burning nocturnal pains, > external heat, weariness of life and yet fear of death.

Arsenic is the remedy for debility from overtaxing muscular tissues by prolonged exertion, climbing of mountains, etc.

In this article Dr. Boericke has covered the ground very completely and his indications are clear cut and practical, but we would like to mention several remedies which have done us valuable service in a number of cases. They are *Arnica*, *Cimicifuga*, *Spigelia* and *Phytol*. *Arnica* when there is the great soreness and sensitiveness to a jar. *Cimicifuga* (or *Macrotin*, its alkaloid) where the pains are neuralgic and are engrafted upon a rheumatic cachexia. *Spigelia* with the shooting pains (Mag. Phos.) *Phytol* after mercury. (Ed.)

Finally comes a copy of an article written by our own Dr. C. E. Fisher, of the United States at large, on "The Realm of Arsenicum in Surgery," written for *Progress* and copied into April number of the *North American* hereto appended:

Under modern surgical methods, asepsis and antisepsis, the field for ar-

senicum in connection with surgical practice is limited. In fact, it is only where there has been a violation of asepsis that it is called for at all, in connection with the surgery of accident or operation. Given, clean surgery, aseptic surgery, perfect prevention of infection, and it is then only in the strictly arsenicum patient that any surgical disorder will arise that needs the deep medication for which arsenicum stands when it stands for anything. For it is a "profound remedy."

But introduce sepsis, whether of the simple, malignant or mixed type, and arsenicum symptoms are very likely to arise. These are cardinal. There can be no mistaking them. They are the prostration, exhaustion, anemia, pallor, restlessness, apprehension, anxiety, perspiration, hypocritic countenance, etc., of arsenicum almost always. I rarely find the so-called typical arsenicum thirst, "desire for small quantities often," yet it is occasionally met with and when present the call is all the louder for this remedy. But its absence is no contradiction if the other arsenicum symptoms are in evidence.

Sepsis has chills, or chilly sensations, hectic, either hot or cold sweatings, diarrhea, debility, anguish. Arsenicum has all of these. In sepsis the crisis is likely to occur after midnight, when the vital forces are low and nature is asleep, a very characteristic expression for arsenicum.

The restlessness is not of the violent, explosive, vehement aconite type, nor is it in the intolerable restlessness of rhus. It is neither, and yet both, paradoxical as this may seem. It is a restlessness due to apprehension, to a sort of dread, a kind of premonition, as it were. It is the restlessness of anguish, of an indescribable thought, feeling, terror, or something else that the patient is very sick, is likely to die. He cannot keep still if he would. He moves, not to be moving, but because he cannot help it. At the same moment instead of there being the frightful tossing of the acute aconite, or the irresistible restlessness, and throwing of one's self about as with rhus, the arsenicum subject keeps up his little jerkings and shiftings while anguished, despairing and knowing not what is about to happen. And it is almost always either after midnight or in the early afternoon that this restlessness and anguish occur.

In sepsis calling for arsenicum the discharges are foul, the diarrhea fetid, the pus thin and watery, also foul-smelling, the wound unhealthy. Debility is the characteristic, pallor the complexion. General feebleness of circulation and physical reaction leads on to dropsical accumulations in the tissue, as under the eyes, in the extremities of the lower limbs, the back of the hands, etc.

With these characteristics arsenicum is a tower of strength in the sepsis of surgery.

By the way! Did you ever try to abort a bone felon with Arsenicum 200th?

THERAPEUTIC INDIVIDUALISM.—In an article entitled "A Fundamental of Prescribing," by Dr. W. B. Hinsdale, in *April Century*, occurs the following:

"Pneumonia in a child is a very different state of physiological and anatomical affairs from the same disease in the aged. Pneumonia in a drunkard, in a person with a leaky heart valve, with a retarded portal circulation, in a neurotic, in a person with an impressionable cerebrospinal sys-

tem, manifests itself very differently regardless of what may be a single exciting cause. Some people with pneumonia have chill predominating, others have a turbulent fever, others suffer much pain; pain may have its time of aggravation and amelioration, one may be delirious, children may have spasms, others suffocate, some are lethargic, others restless. The circumstances of the onset also enter into the picture, the rate of breathing, the character of the cough, if there be any, the nature of the expectoration, the eliminations from the body, the feeling of the skin, the expression of the face, the attitude in bed, and many other things enter into the problem and individualize the particular sufferer, and to distinguish what may be called his personal pneumonia. I have seen it stated thus: "Your pneumonia is not that of your neighbor, for you are not he; he is a child, an adult, a senex, previously healthy or not, thin or fat, in good health, or run down with care, work or starvation, or he has a pneumonia of a different etiological character." (Jacobi). The mere naming of whatever be the etiology or character of pneumonia gives to the mind of the physician, of course, a diagnosis of the disease, but not of the remedy.

Our diagnosis is of two kinds; first, determining the nature of and naming the ailment; second, selecting the remedy that corresponds to the state of the patient. We treat patients not diseases. The name of a disease gives a vivid impression of the morbid process at work in a vital economy, but does not, in the least, give a clue to medicinal needs, as I have endeavored to indicate.

To use the pneumonic state still further, as an illustration, there are scores of remedies that are curative in pneumonia, but they, like the expression of the disease, must also be particularized. There is the Aconite condition in pneumonia, the Veratrum viride condition, the Ferrum phosphoricum pneumonia, the Kali carbonicum pneumonia, the Phosphorus stage, the Bryonia complications, the Antimonium tartaricum cyanosis, the Lycopodium patient, the Hepar cough, the Stannum cough, the Arsenicum exhaustion, and so on through the list of remedies that may be counterparts of the sufferer in a particular phase of illness.

The remedy may be an unusual one, just as the patient may present an unusual picture of what ails him. Individualism is the keynote of our applied therapy.

Aconite.—The Mental Sphere.—Dr. J. Cresswell Lewis contributes an interesting article on the "Mental Sphere of Aconitum Napellus." Such influence depends on the power of the drug to depress the sensory spheres of the nervous system mainly, but also the motor and reflex. The most prominent mental symptom of aconite is fear, following which secretive-ness, and desire to be alone as consequences, lead up to a plaintive fear of death. Restlessness is the second characteristic symptom, especially in thoughts. Next comes anxiety, accompanied by forebodings and vagrant fancies. Procrastination, clairvoyance, and dreaming fill up the picture. The effects of anxious dreams, nightmare in the overworked, worn-out, or abnormally psychically developed are met by aconite.—*Pacific Coast Journal of Homoeopathy*.

Natrum phosphoricum is always indicated in excess of acidity, sour eruptions, sour vomiting, sour smelling discharges. The yellow, creamy coating of tongue and back of the roof of mouth is a good guiding symp-

tom. So it is of benefit in naso-pharyngeal catarrh with thick, yellow, offensive mucus. The sixth potency is best.—Boericke in *Century*.

Lithium carbonicum is an important remedy in cystitis, subacute and chronic, especially when there is a rheumatic diathesis present. Use the 1x trituration every two hours.—Boericke in *Century*.

Zincum Metallicum is one of the best remedies in dropsical affections, especially when the patient complains of pain or uneasiness in the renal region.—Boericke in *Century*.

Persons annoyed by being always compelled to hurry to stool after eating may find relief in a few doses of Aloes 6.—April *Century*.

POINTS TO REMEMBER ABOUT RHEUMATISM.—It is a febrile disease, characterized by pyrexia and arthritis with effusion, the inflammation changing from joint to joint and attended with great pain.

Tendency to relapse after convalescence and subacute attacks often succeed the acute.

In children pain and fever often slight, but still tendency to heart damage very great, thought to be "growing pains."

Tonsillitis is frequent at the onset with fever, or it may precede it by a week or two. There may be stiff neck.

Complications. Endocarditis, pericarditis, pleurisy. Great tendency to serous inflammation attended with great effusion, usually quickly absorbed. That the serous membranes should be especially affected their close alliance with synovial m. would make appropriate, but the inflammation is not fugitive as in the joints, but takes a firm hold, especially the heart. Chorea, erythema, purpura.

Gonorrheal rheumatism. Wrist and knee affected by preference. No great pyrexia, but little tendency to inflammation of internal organs.

The rheumatic family of diseases includes besides the rheumatic fever, chronic articular rheumatism, which often follows it. Muscular rheumatism, of the fibrous tissues especially.

Aconite produces pains in the fibrous tissues, generally the muscles and the large joints, but no marked redness or swelling. It is the remedy in the beginning when you have the high fever and great restlessness, anxiety and fearfulness marked at night. Patient knows he is going to die this time sure. The nervous excitability is most marked when Aconite is the remedy. Stiff neck and lumbago after a chill, especially with fever. Under its use the heart is much less liable to be affected. Painful palpitation, præcordial anxiety and other cardiac complications indicate its use. In the cardiac complications of rheumatism Aconite is the chief remedy.

Pulsatilla in subacute cases, with little or no fever, the articular inflammation shifts readily from place to place. Its pains are worse towards evening and at night, also at rest and in warm room and motion in open air. Chilliness often occurs with increase of pain, yet with desire for cool, fresh air. There is the peculiar feeling of subcutaneous ulceration about the affected joint.

Ferrum phosphoricum vies with Aconite as a remedy in the first stage of rheumatic fever, and is to be preferred when the nervous agitation, fear and restless anxiousness is lacking, although you have the high fever, soreness, pains, etc. It alone, if persisted in, will often cure the disease.

Rheumatism, especially of the shoulder, pains extend to upper part of chest, attacks one joint after another.

Bryonia follows these remedies when the affected parts soon become red, a shiny pale redness, swollen, exquisitely sore and sensitive to touch, greatly aggravated by the least motion. Parts are *hot, tense* and *swollen*. Fever rather less now. The mental condition is boorish. He is most irritable. Pulse full and strong.

Mercurius. The profuse and sour sweats that give no relief so characteristic of this drug and of rheumatic fever place *Mercurius* as an anti-rheumatic in the materia medica. In subacute forms, *readily relapsing*, where the pains are much at night, especially towards morning, the patient is very sensitive to cold and very thirsty. The swollen joints are red and very painful. Although the disease spreads to other joints, still the pain in those previously affected is lessened thereby. The pains are very markedly increased by the warmth of the bed. This medicine is particularly useful when the pains seem seated in the bones—*profuse perspiration without relieving the pains*. The more frequently relapses occur the more especially is *Mercurius* indicated.

Colchicum, used by both schools, but its usefulness is wholly due to its homœopathicity. It produces a perfect picture of inflammatory rheumatism—pain, swelling, sweat. Remember it in pericarditis when occurring in the course of rheumatic fever, in torticollis, as it seems to have an elective affinity for the muscles of the neck. Its pains are *tearing* and there is marked muscular weakness, especially in the arms and legs, as if paralyzed, hence pulse small, weak and quickened. Debility very marked. The stomach is generally affected, nausea when smelling food. Urine scanty and red. Feeble, debilitated persons who have suffered with rheumatism a long time.

Ledum instead of tending to copious effusion has scanty effusion and tends to harden into nodosities. Nodes about the joints. Symptoms usually extend from feet upwards. Patient is worse from covering parts. Smaller points especially are affected. *Much coldness*. *Ledum* is often called for when *Colchicum* has been abused and the patient is generally reduced in strength. Lack of vital heat.

Rhus toxicodendron is one of the great homœopathic medicines for rheumatic states. Both acute and chronic cases call for it. It is especially suitable after exposure to wet when overheated and perspiring, after great physical exertion. It has an especial affinity for the deep muscles of the back. Characteristic are the marked stiffness and soreness, aggravation from cold, damp, stormy weather, corresponding improvement from extreme warmth and in more chronic types, the improvement after the parts get "limbered up." There is much restlessness and desire to move about, it brings some relief to the aches and pains.

Administration. Of the selected remedy, use the third potency, giving a dose every two hours until improvement shows itself, then stop.—Dr. Boericke, in *April Century*.

THE HAHNEMANNIAN MONTHLY.

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BOTH PATHOLOGY AND SYMPTOMATOLOGY THE NECESSITY OF THE SCIENTIFIC PRESCRIBER.

BY

ELDRIDGE C. PRICE, M. D., BALTIMORE, MD.

(Read before the Annual Meeting of the Maryland State Homœopathic Medical Society, May 4, 1910.)

THE physician's great problem, par excellence, is man in his relation to *materia medica*, and *materia medica* in relation to man.

From the standpoint of the physician, therefore, man and drugs are inseparable; the great questions being how man can be most benefited by drugs, how to understand man so that drugs may benefit him, and how to understand drugs in relation to man that they may fulfil their purpose.

Hahnemann's idea of how this problem should be solved is that all symptoms which man manifests when not in a state of health should be carefully studied and compared with all symptoms which a drug is capable of producing when given to a healthy human being.

This double symptom idea forms the foundation of homœopathic philosophy. It may also be used as the foundation for antipathic philosophy, as the two factors in the problem, man and drugs, are simply considered as raw material, the manner of applying our knowledge of what drugs will do to diseased man requiring elaboration and systematization before formulation into a definite philosophy.

While it is most interesting to enter into a discussion of the *two* great laws of cure, the law of dissimilars and the law of

similars, yet at this juncture we are simply concerned with the law of similars; the question being how best to systematize our knowledge of drug pathogenesis for the purpose of healing the sick.

Two methods have in the past claimed the chief attention of the medical profession, the one is the consideration of drug application from the pathological standpoint, and the other is the consideration of drug application from the standpoint of pure symptomatology. After many years of studying this subject, the review of much conflicting testimony, and the shifting of view points, our ultimate conclusion is that both ideas demand consideration.

If a prescription is based solely upon its pathological relationship to the disease condition, the prescriber is liable to go astray because of the fact that many drugs are capable of producing practically the same gross pathological conditions; while, if on the other hand, the prescriber selects his drug solely because of its symptomatic resemblance to the disease condition, he may also go astray because of the similar fact that many drugs have a detailed symptomatology quite closely resembling.

I am assuming, as you must be aware, that the pure drug symptomatologist ignores pathology, and considers dominantly subjective symptoms, as he has done since the days of Hahnemann.

Do not misunderstand me to mean that Hahnemann was this kind of a symptomatologist, because his writings emphatically pronounce him not to be. Hahnemann evidently took into consideration in his study of drugs all that drugs would do. His "totality" meant what it implies, that is, the whole. He considered every subjective and objective expression which a drug is capable of producing, together with all tissue changes which could be observed by the means at his command.

Our conclusion, therefore, after considering this subject in all its bearings, is, that a drug can only be prescribed in accordance with the requirements of science by taking into intelligent consideration the pathology, and the subjective and objective symptoms of both the patient and the drug to be prescribed.

Because of these two great theories to which reference has been made, *i. e.*, the theory of pathological prescribing and the theory of symptomatological prescribing, the physician is

liable to err at one extreme or the other. It is most difficult to take into proper consideration that which is most significant in the pathology of the case, and also that which is most significant in the symptomatology of the case. This is the central idea of these remarks, the essential point which should be emphasized.

All symptomatology depends upon and rests upon pathology; and all pathology causes more or less symptomatology. Exception may be taken to both these statements, but only in the most trivial cases in the first instance, such for example, as slight neuralgia, or temporary local congestion, and in the second instance in a few isolated cases in which grave pathological changes occur without adequate symptomatic expression. These are rare, however, and may be regarded as exceptions which do not prove, but *emphasize* the rule.

That with few exceptions drugs need a careful re-proving—similar to Dr. Bellow's belladonna proving—may now be regarded as a generally accepted fact. The reason such re-proving is necessary, is, first, that many detailed symptoms are not due to the drug, but to the individual peculiarities of the experimenter, and second, because by this intermingling of uncertainties with certainties the whole record of alleged facts is vitiated.

The method for securing approximately accurate information as to what drugs will do pathologically, which may be applied by the practical physician, may be stated as follows:

Instead of adhering strictly to the detailed, Hahnemannian, anatomical arrangement of our symptomatology, a drug may be studied, first, from the standpoint of its obvious cell-altering influence upon the various organs and tissues of the organism, and second, from the standpoint of the symptomatology due to this pathological involvement. The method may be reversed if thought desirable, and the symptomatology first studied and traced back to its pathological origin. For example, let us take our familiar friend upon whom we all have relied in many cases in the past and to whom we all owe thanks for much good service done, bryonia.

We all know that drugs act usually in one of two ways, either by absorption and distribution throughout the organism by the blood current, or by direct impress upon the nervous system, or in both ways. Take, for example, hydrocyanic acid. From the time a lethal dose is placed on the tongue to

the cessation of heart action, the drug could not have been absorbed and carried through the blood to the medulla. With morphine, strychnine, and other drugs, transit through the blood current to the nerve centers seems to be a necessity. In the case of bryonia the drug is first introduced into the stomach, and then its influence extends throughout the whole organism.

Some years ago my friend, the late Dr. A. W. Woodward, of Chicago, published a book entitled "Constitutional Therapeutics," in which he endeavored to trace a uniform sequence of symptoms in drug symptomatology. Of bryonia he says: "Of seventeen experimenters with material doses of *bryonia* on animals and man, twelve and probably fifteen indicate primary derangements of the gastro-intestinal tract, followed by motor excitement or depression. Of this number eight show mental disturbance, followed by cutaneous phenomena as third and fourth functions involved, while four reverse the order and give cutaneous followed by mental. Further experiment must determine which succession is correct; for the present the former is adopted."

The study of bryonia made by the Medical Investigation Club of this city cannot be regarded as altogether corroborating this sequence of symptoms, in its study of twenty-five records of bryonia effects, and we therefore will not adopt any theory as to which particular organ or tissue is first affected by physiological doses of bryonia. On general principles we know that the *weak point* in the organism may be expected to respond first. Experimenters whose digestive tract is weaker than other systems of the organism will first give expression to symptoms therein. In experimenters whose muscular system is for any cause sensitive we will first find expression of muscle difficulty; and so on through the whole symptomatology of the drug. Regardless of sequence, therefore, we will simply take up the various tissues for which bryonia seems to have an affinity.

Upon an examination of the approximately reliable records of bryonia symptomatology we find that the drug has an affinity for the mucous membranes, the circulation, the muscles, serous tissue, glandular tissue, the mind, and to a certain extent the skin. These symptoms form our starting points for a study of the reliable effects of the drug.

Let us start with the mucous membrane. We find this tissue

dry, primarily speaking, whether it be of the respiratory tract or of the intestinal tract. From the respiratory tract there is a discharge of a thick mucous which may sometimes be greenish. This thick condition is due to the dry state of the mucous membrane, from which little moisture is thrown out.

With this dry condition of the mucous membrane of the respiratory tract what is more natural than the dry cough which we have learned to know as so characteristic? With this dry cough there is a sensation of tightness due to the same cause. The membrane being sensitive, there may also be some pain in conjunction. Such a state, if it involve much surface, is sure to have its effect upon the circulation and as a result we find the heart's action rapid. Add to this the special affinity which bryonia seems to have for muscle tissue and the heart becomes weak in its action. It is rapid, out of proportion to the amount of exercise, because of this weakness; and to this weakness may be added a certain irritability. As a result of this state there is an inability to inspire deeply, because of the sensation of a valve closing which interferes with a deep, satisfactory inspiration; this being practically consistent with the whole existing condition.

With an irritable mucous membrane, vexing the patient by persistent coughing, together with a weak irritable heart, and inability to breathe satisfactorily, it is not remarkable that the patient should be morose, anxious, and even ill-natured.

We find that bryonia also acts upon muscle tissue generally. The condition is similar to acute rheumatism. The muscles are sore, painful, they may be swollen, and motion aggravates. Here again the circulatory disturbances may be taken into consideration together with all symptoms consistent with this condition, including the patient's mentality.

Again, we find bryonia acting upon the glandular structures of the organism. The liver may become congested, swollen, hard, and in this condition the pains therein are aggravated on the slightest motion. Pressure over the affected gland gives pain. Here is a dry state of affairs which may extend into the intestinal tract, and accompanying we have the characteristic constipation produced by the drug. This state of the mucous membrane of the intestinal tract may extend on up into the stomach and the patient may be nauseated and at the same time have great thirst for large quantities of water; the reason for this thirst being quite obvious in the dry, congested state of the

mucous membrane of the stomach. Here again we may have the circulatory involvement, together with the mental state which is characteristic of both the condition and of the drug. In this state of the mucous membrane of the stomach it is not remarkable that the patient may wake with nausea or that he may vomit, or even vomit bile which may have regurgitated into the stomach. Nor is it remarkable that we find the symptom recorded by Hahnemann that "After eating food he relished, sickness and loathing." The stomach is not in a condition to digest food put into it.

Another symptom which Hahnemann has recorded is, that "the patient vomits solid food but not liquids." Here is evidence of the dry state of the mucous membrane to which attention has already been called; and this illustrates a working together of the pathology and the objective and subjective symptomatology of both the condition and of the drug.

Which ever way we approach this study, whether beginning with the pathology or the symptomatology of the case, if our fundamental knowledge of the pathogenesis is correct difficulties are reduced to the minimum in selecting the correct drug for the condition; but both pathology and symptomatology must be considered.

On the other hand, if we adopt as our philosophy either the pathological method of selecting drugs independently or the symptomatological method independently we may be led astray. For example, bryonia is not the only drug that causes a dryness of mucous membranes, nor is it the only drug that will produce pain, and pains worse on motion, nor is it the only drug that will produce thirst, nor is it the only drug that will produce mental depression and irritability. Aconite and belladonna will both produce dryness of mucous membrane, but their detailed symptomatology deviates from that of bryonia. Phosphorus is another drug that acts upon the heart tissue, producing a weakness of its structure and dyspnoea—to say nothing of its fatty tendency—but bryonia and phosphorus have different symptoms resulting from these two somewhat similar conditions. Arsenic has great thirst, but arsenic has not the extreme dryness of the mucous membranes so characteristic of bryonia. Mercury produces a congestion of the liver which might be somewhat difficult to differentiate from the congestion of bryonia, unless we call upon the detailed symptomatology of these two drugs for differential purposes. And so we

might multiply illustrations *ad infinitum* which would serve to emphasize the fact that it is not upon pathology alone we must depend for the selection of the drug, nor is it upon symptomatology alone that we must depend, but we must look into the double totality if we propose to make scientific and practically accurate prescriptions.

Furthermore, I would call attention to the fact that in my opinion it is unnecessary to search for out-of-the-way symptoms and little evidences of perverted physiology which may have been experienced by some idiosyncratic, and which may or may not have been caused by the drug under study. The safest course is to confine our investigations to the effects that have been observed more than once and in different experimenters, to the effects that are consistent with well-known facts concerning either the symptomatology of the drug under study, and finally to a consideration of the harmony of incidents in relation to the pathology and the symptomatology of both the patient and of the drug to be prescribed; the pathology and symptomatology of the patient for the purpose of *correct diagnosis*, and the pathology and symptomatology of the drug for the purpose of prescribing the *similimum* for the case to be cured.

SHOULD CLINICAL EXPERIENCE BE CHOSEN RATHER THAN PURE SYMPTOMS AS A GUIDE IN MEDICAL THERAPEUTICS?

BY

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(Read before the Cincinnati Homœopathic Lyceum, February 7, 1910.)

WHEN asked to write a paper upon the above topic, I was at first a little puzzled as to its exact meaning, but after pondering over the matter for some time I decided to consider it according to the following interpretation: In the selection of a homœopathic remedy, should we base our prescription upon the total symptomatology presented by the patient, matching drug symptoms to disease symptoms; or, recognizing the fact that a specific cause acting upon certain structures has a tendency to produce a peculiar but definite group of symptoms and in orderly sequence, thus constituting a special disease, should we

conclude that in the mere recognition of such a nosological entity we have sufficient ground for specific medication?

It is at once apparent, theoretically at least, that a complete symptomatology affords a better idea of the action of disease or of a drug than does a symptom complex grouped under a special name, and hence when an application of the law of similars is attempted, the total symptomatology should afford a more accurate guide. This is clearly stated in the following quotation from the *Organon*, paragraphs 18 and 19: "It is then unquestionably true that, besides the totality of symptoms, it is impossible to discover any other manifestation by which diseases could express their need of relief. Hence, it undeniably follows that the totality of symptoms observed in each individual case of disease, can be the only indication to guide us in the selection of a remedy."

It is evident that without this new basis for prescribing, Hahnemann could not have enunciated his *similia similibus curentur* as universally applicable.

But, as the letters in the alphabet, which when superficially considered or mixed at random are perfectly meaningless, while when intelligently arranged they may convey to us the richest stores of knowledge, so a symptomatology may become perfectly meaningless or rich in interpretation according as the individual symptoms are dealt with.

It has been boastfully asserted that homœopathy is independent of pathology and diagnosis, that the symptoms, Nature's evidence of disease, are the only guide to the remedy and to attempt to cover these with corresponding symptoms found in the symptomatology of a remedy is the surest way to effect a cure. This is an old idea, perpetuated largely by our literature. The classification of drug symptoms on a mere anatomical basis, so conspicuous in our text-books on *materia medica*, has done much to encourage us in prescribing on superficial symptomatology alone, by giving the appearance that this procedure is paramount in the selection of the homœopathic remedy. Moreover, our repertoires, though very serviceable when properly consulted, have been much abused, for through their employment homœopathic prescribing has too often degenerated into a mere mechanical hunt for symptoms. It is admitted that prescribing in this superficial fashion does not require much knowledge outside of the manifest symptomatology of the remedies and of the disease, but the large number of

proven drugs, with their almost innumerable symptoms now on record, render this process, when consistently carried out, a most tedious and difficult task, growing more embarrassing with every proving. No doubt, the correct remedy may thus frequently be found, but the method is faulty, and can never prove accurate in its results. It is a departure from the teachings of Hahnemann, who in his rules laid down for drug provings carefully directs that the order of the succession of symptoms produced in provings should be observed, so as to make distinction between the primary effects, the reaction of the organism, and subsequent alternating symptoms, the primary symptoms to be mainly depended on for the selection of the remedy. What justification, then, can there be in omitting so important a matter in our ordinary works on materia medica? Why this indiscriminate mixture of primary, secondary, and remote symptoms? Why this confusing array of contradictory symptoms lacking any intimation of orderly sequence—a veritable Tower of Babel? The same defect is noticed when we seek to distinguish between the symptoms distinctly belonging to the action of the remedy and those unusual symptoms, the result of the individuality of the provers. In fact, in our larger works these individual or isolated symptoms, accidentally produced in the provers, by far overshadow in numbers and seeming importance those to my mind really essential symptoms uniformly produced by the drug. When such symptoms as dreaming of white ghosts are attributed to *sarsaparilla* and dreaming of black ghosts to *arsenic*, and the comparison is incorporated in our standard works on materia medica, the inquiring student might well wonder at the credulity and the superficiality shown by the practitioners of our school.

It must be apparent to all that an indiscriminate combination of primary, secondary, remote, and isolated drug symptoms, to which a mechanical selection of symptoms would lead, would not represent the true action of the remedy, and could, therefore, not prove homœopathic to the case, though all the symptoms were nominally covered. Besides, by multiplying the provings of any given remedy, its symptomatology would finally become so extensive and varied as to cover an unreasonably large number of our cases. Since the source of all symptoms is a perverted cell activity, our remedies cannot prove curative homœopathically unless the particular cells at fault are reached, and influenced in a special manner. The value of

symptomatology depends, then, upon its proper classification into primary and secondary effects, into symptoms essential to the drug or disease distinct from those symptoms peculiar to the individual himself, and upon the harmonious grouping of symptoms into their pathological equivalent, whether functional or anatomical. In other words, the series of functional changes produced by the drug or disease, interpreted through the symptomatology, including all the laboratory findings, must be our guide in the selection of the remedy. Given a certain case, the choice of the indicated remedy is a continuous process of exclusion. First are excluded all remedies which have no special affinity for the tissues involved by the disease (or, reversely, collect all those remedies which have a special affinity for the parts); second, those are excluded whose action upon these tissues is not capable of producing a pathology similar to that of the disease; third, from the remaining small group of remedies that one is selected whose symptoms, individual or isolated as well as pathogenic, most nearly will cover all the symptoms presented by the patient.

This ideal method might seem more theoretical than practical, as our knowledge of pathology and drug pathogenesis is still too limited, but no one who has read Hahnemann's *Organon* can doubt that it nearly represents his idea of prescribing, and most of us have, consciously or unconsciously, adopted a similar plan. What we need is a concerted endeavor to render this method, by a critical analysis of our provings, more available.

That the rifle-shot prescriptions of the average prescriber are not sufficiently often hitting the "bull's eye," but some reform in our method of prescribing is sadly needed, I have observed from my own experience, and from the results of the following experiments: Six chronic cases apparently cured, or relieved for a considerable time, with the single homœopathic remedy were reported with as much detail as possible to the members of the Falls Cities Homœopathic Medical Society, each member present being requested to write upon a slip of paper the medicine which in his opinion had effected the cure. For the first case seven slips were collected and four different remedies were designated; for the second, eight slips and four remedies suggested; for the third, nine slips and six remedies; for the fourth case, eight slips and eight different remedies; for the fifth, fourteen slips and nine remedies; for the sixth, eleven

slips and eight different remedies designated. This lack of uniformity in a majority of these prescriptions was a disappointment to me, and convinced me that the art of homœopathy, as now generally practiced, still leaves much to be desired.

The ideal materia medica should contain a comprehensive description of the general action of each remedy, giving the normal sequence of symptoms, and affording accurate data regarding the effect on the secretions of the body. It should state further the number of provings from which the symptomatology of each drug was compiled, and indicate by figures after each symptom the number of times it was reproduced, and, as far as possible, the primary and secondary effects should be differentiated. This would greatly enhance the value of the anatomical classification of symptoms now in use. Thanks to the laudable efforts of the Institute of Drug Provings, of the American Homœopathic Ophthalmological Society, and of the Medical Investigation Club of Baltimore, the beginning of this ideal materia medica has already been made, but the work involved is necessarily of such immense proportion that but little of practical usefulness has as yet been attained.

Under ideal conditions, as I have tried to show, the total symptomatology, intelligently interpreted, would be all the guide necessary to an accurate choice of the remedy. But as these conditions have not yet been obtained, practical experience cannot well be disregarded.

The use of specifics, except when the treatment is aimed directly at the cause, as in the use of antitoxin in toxæmia, or of quinine in malaria, has proven disappointing to our old school confrères, and there is a growing tendency to select a treatment for the individual condition of the patient rather than to prescribe a specific for the disease. This individualization reached an extreme when Wright and his followers adopted the procedure of inoculating each patient with his own germs to raise the opsonic index. Undoubtedly this method is based on the law of similars, but the question arises, how nearly similar should the action of a remedy be to produce the greatest curative effect? Similarity is a comparative term. It may be so slight as to fail of recognition, or it may be so complete and exact as to obliterate all perceptible differences. Somewhere between these two extremes there is a degree and quality of similarity which, in accordance with the law of cure, is capa-

ble of eliciting Nature's greatest efforts. We may infer that the curative action of medicines is proportionate to their relation to this point of similarity, and that, therefore, every remedy has a curative action of considerable latitude diminishing with a departure from this point toward either extreme. It is common experience that a remedy which does not satisfactorily cover the symptomatology of the disease, yet very often removes that very group of symptoms prominent under the remedy, while the remaining symptoms persist until covered by another drug. A corresponding latitude of curative action has been observed in old school therapy. At the International Hygienic Congress held at Budapest some years ago Roux reported that tetanus serum is antitoxic not only to tetanus toxin, but also to snake venom, while snake venom serum in turn proves active against scorpion poison.

In the study of precipitins, which are reactive products capable of producing coagulation of the specific fluids that by inoculation gave rise to them, we find an activity directed against various substances similar in nature to the relative causes of the precipitins. Turning to Coplin's Manual of Pathology, we read: "Within certain limits the action of precipitins approaches specificity. The serum of an animal immunized to human albumens, reacts, although with less intensity, to the serum of the higher ape; rabbits immunized to chicken serum yield a precipitin that also reacts with pigeons, and animals immunized with albumen derived from the egg of the chick produce sera containing precipitins for the egg albumen of closely related birds. Precipitins are useful for the identification of blood in medicolegal cases, and may be used for the recognition of horse meat and dog meat in sausages, and are of value in showing the relation existing between closely allied animal species."

Pierce writing in the *Albany Medical Annals*, and Woltmann, in the *Journal of Experimental Medicine*, admit that antitoxic bodies possess a certain latitude of action against toxins of a similar nature, and designates this action as specific only because it has its limitations.

Von Behring and Römer have found that immunity to tuberculosis is produced in cattle much more completely and lastingly with injections of the human bacillus than with the bovine germs. Nathan Raw, of Liverpool, in his paper on the treatment of tuberculosis read at the International Congress of

Tuberculosis held in Washington in 1908, reports much better results when his patients infected with the human tubercular bacilli were treated with bovine tuberculin than when the tuberculin from the human bacilli was used, and, reversely, infections with the bovine bacilli—so-called surgical tuberculosis—was best treated with the tuberculin from human bacilli.

It seems, therefore, true that the greater the similarity of the remedy, up to a certain point, the greater is its curative action, while remedies of lesser similarity produce a proportionately lesser effect. It follows that a prescription based upon the name of a disease, when the medicine has a certain degree of similarity, is not wholly without result; and that when for one reason or another a satisfactory similitum can not be found, clinical experience may serve as a helpful guide. But while admitting that clinical experience may have some value, it should be our unremitting aim and endeavor to become masters in the art of prescribing upon intelligent symptomatology. This means progress along all lines of medical science. Homœopathy can never grow by building around it—as was done around China—a stone wall of conservatism, with declarations of “Holy, Holy!” Statistics everywhere, including the latest in the Louisville City Hosiptal and other institutions, show a decided advantage of homœopathic prescribing over that of the old school, but we must keep pace with the progress of that school—progress towards our own goal—if we shall do honor to Hahnemann and the principles he bequeathed us. Truth is never in conflict with itself, and no greater service can be done to homœopathy than to bring its precepts to the light of research and logic, and ridding its art of the mysterious, the vague, establish it along lines both rational and practical.

ANKLE CLONUS IN A CASE OF HYSTERIA.—While in the hospital for convulsive manifestations of undoubted hysteria it was found that in addition to greatly exaggerated patellar reflexes and achilles jerks the patient exhibited ankle clonus. On the right side the clonus could be maintained for over a minute, and on the left, for about a half minute. Two weeks later the manifestations of hysteria were greatly improved, the convulsions had ceased, the knee-jerks were only moderately exaggerated and clonus no longer could be elicited. Notwithstanding the fact that ankle clonus is supposed always to be indicative of organic nervous disease the authors, Heard and Diller, are convinced that this sign can occur as an expression of hysteria.—*Jour. of Nerv. and Mental Dis.*, April, 1910.

**SOME SUGGESTIONS TO THE GENERAL PRACTITIONER CONCERNING
THE SUBJECT OF RHINOLOGY.**

BY

GEORGE W. MAC KENZIE, M. D.

PAPER II.—ANATOMY OF THE LATERAL NASAL WALL.

WHEN Dr. Roman asked me to read a paper before the Carl Vischer Homœopathic Medical Society, he suggested that I tell something about the anatomical routes of infection from the nasal cavity to other adjacent cavities. In other words, how can a cold in the head lead to secondary complications in neighboring parts? In order to do this at all satisfactorily, we must review briefly the anatomy of the nose, particularly that of the lateral wall. To aid us in the description I have brought along a few sketches, specimens and stereopticon photographs.

The lateral wall of the nose is quite complex in structure so I shall not take up too much of your time with too many details, but limit myself to the most salient features.

The first specimen and stereopticon photograph show the lateral wall of the nose with the mucous membrane and fleshy parts intact, the specimen having been hardened merely in 60 per cent. alcohol. The greatest horizontal dimension is along the floor and the least along the roof. The lateral wall is somewhat concave and quite uneven, as you see, with usually three, but in this case four, firmly attached scrolls of bone covered with mucous membrane of varying thicknesses dependent upon the location. In the lower part of the nose, known as the respiratory portion, the mucous membrane is thicker than in the upper olfactory portion. These scrolls or turbinates resemble somewhat in shape one of the shells of the common black mussel (shell-fish) and is so called by the Germans (*Muschel*). The convex side of each is directed medianward and the free edge downward. They are known as the (1) inferior turbinate, which is the largest; (2) the middle, which is somewhat smaller, and (3) the superior, which is the smallest. The fourth, also known as the *Concha Suprema*, which is present in this case, is still smaller than the superior or third, and when a fifth is present (exceptionally rare) it is the smallest of all.

The inferior and middle turbinates are to us the more important, so that beyond mentioning the others, they need no particular consideration at this time.

The inferior turbinate is the only one which may claim the dignity of being a separate and distinct bone. It is attached to the crista turbinalis of the superior maxilla anteriorly and to the crista turbinalis of the palatine bone posteriorly, both of which are shown in the sketches and specimens.

The bulk of the inferior turbinate is a thin scroll of bone attached to a vertical plate (making a T union, the horizontal part of the T, however, lies vertically). The bone is composed essentially of four processes without any body. The largest of these is the processus turbinalis which has a free border directed downward into the nasal cavity; the processus ethmoidalis, which is double, lies vertically and is above the insertion of the processus turbinalis; the processus maxillaris lies vertically and is below the insertion of the processus turbinalis. The processus ethmoidalis and maxillaris comprise a fair portion of the median antral wall. The processus lacrymalis bridges over the sulcus lacrymalis of the superior maxilla, transforming it into the canalis naso-lacrymalis, which forms *the first path of communication from the nasal cavity to neighboring part* through which infection may extend to the saccus lacrymalis causing a Dacryo-cystitis.

The inferior turbinate is located in the respiratory portion of the nasal cavity. The mucous membrane covering it, except for a small area on its concave side, is of a characteristic type. A brief description of this mucous membrane will answer generally for that of the mucous membrane of the rest of the respiratory portion. I have considered this part of the anatomy of sufficient importance to make a sketch of it. The mucous membrane covering the respiratory portion is very much thicker than that covering the olfactory portion and somewhat thicker than that lining the cavities of the sinuses. The epithelia are of the ciliated columnar variety, while those covering the olfactory portions are not, but on the contrary are alternately special sense cells and supporting or insulating cells. The epithelia of the respiratory portions are not pigmented while those of the olfactory are. The mucous membrane of the respiratory portion contains also goblet cells, which normally number about one to every 100 ciliated columnar cells. The stroma is composed of loose connective tissue containing elastic fibres. It is rich in mucous glands (compound tubular) and a vascular network (cavernous system) all of which are represented in the drawing. The mucous membrane is richly sup-

plied with vaso motor nerves derived from the sphenopalatine ganglion and with sensory nerves from branches of the fifth. The mucous membrane covering the olfactory portion, on the other hand, contains no mucous glands or venous network, and the essential nerve supply is from the first (olfactory), special sense, nerve.

The pathologic conditions of the inferior turbinate are naturally determined by its location and the character of the mucous membrane which covers it. It is more exposed to changes in temperature, to irritating vapors, dust, etc., than any other part of the nasal cavity (except it be the septum in cases of marked deflection). Nature, therefore, has seen fit to fortify it more, but in spite of all the fortification, it suffers at times. When we consider its location together with its histology we would naturally expect to find vaso motor disturbances and inflammations, acute and chronic. After a long period of repeated exposures and acute inflammations, we look for permanent changes, hyperplasia, *i. e.*, an increase in the number of elements which go to make up the mucous membrane. The changes which result from chronic catarrh lead to such an increase in the amount of connective tissue that at times the enormously thickened mucous membrane protrudes beyond the surface as a mass, which we recognize as hypertrophies, the most favorite location being the posterior end. I have reproduced a typical one in the sketch.

Time will not permit me to discuss all the disease conditions of the several parts, so that I shall limit myself to a very few of the more frequent. The most important symptom of this condition is stoppage of the nose, worse when lying down, associated with a free discharge of mucous. The patient gives a history of very frequent colds, coming on promptly and lasting but a short time. The patient will frequently tell you that he gets as many as several colds in a week, which disappear oftentimes in a few hours. Inspection of the turbinates show them to be quite pale in spite of the history of an acute cold.

The middle turbinate (*concha ethmoidalis*) forms a part of the ethmoid bone. It projects as a thin scroll of bone from the median wall of the ethmoid labyrinth. It is one of the four prominences of the ethmoid bone, which extend medianwards from the lateral wall of the nose. They extend from above and forward in a curved line, with convexity anteriorly, downward and backward. Beginning anteriorly they are (1) the

processus uncinatus, (2) the bulla ethmoidalis, (3) *the middle turbinate* (concha ethmoidalis inferior), (4) the superior turbinate (concha ethmoidalis superior).

The middle turbinate is the largest and most conspicuous of the four prominences. Its lamina or foundation extends into the ethmoid labyrinth and separates it into an anterior and a posterior set of ethmoid cells. The middle turbinate is attached to the crista ethmoidalis of the superior maxilla anteriorly and to the crista ethmoidalis of the palatine bone posteriorly. The middle turbinate furthermore separates the middle from the superior meatus of the nose. On the lateral side of the middle turbinate we have the middle meatus and on the median side the superior meatus. These are very important facts to remember for in examining a patient, should pus be found oozing from the middle meatus it tells us that the patient is suffering from an empyema of one or more of the anterior sets of sinuses—maxillary, frontal or anterior ethmoidal—while the presence of pus oozing from the superior meatus tells us of suppuration of one or more of the posterior set of sinuses—posterior ethmoidal or sphenoidal. A further guide as to location of the empyema is the presence of oedema, hyperplasia or polyps, on the lateral aspect of the middle turbinate which is a certain evidence of empyema of the anterior set of sinuses combined with possibly retention, complete or partial. Because of the prevalence of empyema in the anterior set of sinuses the anterior end of the middle turbinate is prone to hyperplasia, polyps and oedema. Such patients are very likely to suffer from headaches or neuralgia, oftentimes slight, occasionally marked.

While on the subject of the middle turbinate I wish to call attention to a cystic condition sometimes met with. The anterior end appears quite broad and the whole mass is firm, the median surface lies in close contact with the septum, giving rise to pronounced headaches or neuralgia because of pressure upon the anterior ethmoidal nerve and its branches. Many of these cases have been treated for eye strain without results whereas its amputation with the resulting relief of pressure brings about a prompt cure of the headache. I have seen three such cases during the last twelve months.

We shall next proceed to a brief description of the middle meatus. The middle meatus includes that portion of the nasal cavity which is covered by the middle turbinate. Its median

limits are bounded by the lateral or concave surface of the middle turbinate. The upper limit of the lateral surface of the middle turbinate reaches to the roof of the middle fossa and then goes over into that portion of the median wall of the ethmoid labyrinth, known as the bulla ethmoidalis, which can be seen in the illustration and the specimen. This bulla forms quite an elliptically rounded prominence and forms the superior border of the hiatus semilunaris (a gutter-shaped depression the long dimension of which is somewhat curved with the convexity forward and downward and from its shape it gets its name—hiatus *semilunaris*). The superior extremity of this gutter continues forward and upward into the ductus naso-frontalis and serves as a drainage canal for the frontal sinus. This, then, is the *second path of communication from the nasal cavity to a neighboring cavity* (one of the accessory cavities of the nose).

The inferior boundary of the hiatus semilunaris is the processus uncinatus of the ethmoid bone. In cross section it is somewhat wedge-shaped with the apex directed upward and medianward; viewed from the lateral side it runs the whole course of and forms a sort of under lip to the hiatus semilunaris. At or just above the lower posterior end of the hiatus semilunaris is the opening to the maxillary sinus (Highmore's cavity), the *third path of communication from the nasal cavity to a neighboring cavity*. Above this opening and slightly anterior to it is found the opening into the anterior ethmoid cells, which is the *fourth path of communication from the nasal cavity to a neighboring cavity*. Occasionally the opening is found quite high up in the middle meatus.

There is a small portion of the lateral wall of the nasal cavity, where there is an absence of bone and but two thicknesses of mucous membrane which separate the maxillary sinus from the middle meatus. (S) This area is termed the nasenfontanelle by Zuckerkandl, or the pars membranacea by Hajek.

Above the insertion of the middle turbinate we have but a very small portion of the lateral nasal wall remaining and a fair portion of this is taken up by the superior turbinate with a small slit-like space between it and the lateral wall of the nasal cavity, known as the meatus superioris. The most important anatomical feature of this meatus is that in it, is found the opening to the posterior ethmoidal sinuses, the osteum ethmoidalis superior, which constitutes the *fifth path of communi-*

cation from the nasal cavity to a neighboring cavity. The posterior ethmoidal cells are subject to the same character of pathologic changes as are the other cells previously mentioned and deserve the same consideration; however, they are somewhat less frequently involved than any of those of the anterior set of sinuses.

The processus uncinatus is subject to pathologic changes, the most important being a thickening of the mucous membrane (hyperplasia) due to the effects of long-continued irritation of pus from an empyema of one or more of these anterior sets of sinuses. Occasionally the hyperplasia is associated with oedema or polyps. Polyps in this region are looked upon generally as merely oedematous hyperplastic tissue. The hyperplasia tends, by its mechanical presence, to favor retention of pus in cases of empyema and its removal is necessary whenever it is present, no matter whether the associated empyema be of the acute, recurrent or the chronic type. It has been noted that three sinus openings (one for the frontal, one for the maxillary and one for the anterior ethmoidal sinuses) are to be found in the middle meatus. Since these constitute the majority of the accessory sinuses and furthermore since they are more frequently the seat of trouble than the others, the anatomy of the middle meatus constitutes, from the standpoint of sinus diseases, the most important region of the whole anatomy of the nose. The accessory sinuses of the nose are lined with the same character of mucous membrane as that which covers the respiratory portion of the nasal cavity with the exception that there are no venous plexuses present in the mucous membrane of the accessory sinuses; neither is the mucous membrane so thick.

The accessory sinuses are subject to inflammations (acute and chronic) and because of the character of the mucous membrane, inflammations in these sinuses are associated with excessive and altered secretion. In practically every severe cold in the head or infection of the nasal mucous membrane, these cavities are more or less involved. In 95 per cent. of the cases, however, spontaneous healing takes place. In the remainder of cases, because of swelling of the mucous membrane about the orifices, the free exit to discharge is interfered with or the secretion may increase at a rate faster than the drainage can take care of. Under these conditions (retention with pressure) the mucous membrane lining the cavity suffers and the condition is

liable to result in more severe conditions of acute or subacute empyema or abscess. In the worse cases it may lead even to destruction of the periosteum and bone. An untreated subacute empyema can readily become chronic. The symptoms are, briefly, fever, usually not very high, sensation of fulness in the cell affected, tenderness on deep percussion and sometimes oedema of the external wall of the sinus. This subject is very large and the time allowed will not permit me to go into further details at present.

Immediately behind the superior turbinate is a depression in the lateral wall, known as the recessus spheno-ethmoidalis. The posterior boundary being the anterior wall of the sphenoid sinus. In the upper part of the posterior wall of this recess and approximately 4 or 5 m.m. from the median line is the opening to the sphenoidal sinus (ostium sphenoidale) which is the *sixth path of communication from the nasal cavity to a neighboring cavity*. The same remarks that applied to the other sinuses apply in a general way to this; however, it is perhaps the least frequently involved sinus of any.

I would emphasize the fact that involvement of this sinus is more prone to lead to pathologic changes in the optic nerve than affections of the other sinuses, for the optic nerve passes over the cavity and depresses the roof somewhat, as shown in the specimen. The bone separating the cavity from the nerve is sometimes the thickness merely of a sheet of paper.

Since the Eustachian tube opens into the naso-pharynx and not into the nasal cavity proper, I will not consider it to-night; besides, the subject of the Eustachian tube is so large and important a one, that it really deserves the consideration of an entire evening. However, I shall take the opportunity of showing it to you along with the other parts of which we have spoken.

HYSTERICAL TETANUS.—Without having a history of recent injury Robinson's patient rapidly developed trismus and general rigidity. So pronounced was the opisthotones that he could be raised by his head. Incontinence of urine and a temperature of 101F. were features of the case. Anti-tetanic serum having been administered without any apparent effect treatment with suggestion and actual cautery was adopted on the second day with the result that immediately the patient began to improve, and after three or four days of this treatment the patient almost entirely had recovered.—*Jour. of the A. M. A.*, April 30, 1910.

HEMORRHAGIC DISEASES IN CHILDHOOD.

BY

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(Read before the Homœopathic Medical Society of the County of Philadelphia,
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I WISH to draw your attention to the histories of three cases that came under my care and observation during my term of service in the wards of the Hahnemann Hospital, in which hemorrhage was the predominating feature.

It might be of profit to first review the general character of the blood in children and then recite to you the histories of these interesting cases.

Normally the blood of the new born will exhibit certain peculiarities. There is present a high percentage of hemaglobin, reaching as much as 110 or 140 per cent. The red cells are much increased, number from 5 million 825 thousand to 7 million 550 thousand. The size of the red cell is more variable, varying from 3.3 to 10.3 microns in diameter, while the adult will average 7.5 microns. There is an increase in the white cells up to 12 thousand or even more. Nucleated reds are present up to the 4th or 5th day. The polynuclears are increased to 73.4 per cent of the total count. There are certain other differences in the differential count but it is not necessary to burden you with them here. After the first month there is a nearer approach to the adult type and continues so up to the end of the second year, however it does not become entirely adult until the fifteenth year. Sex makes no difference in the picture. The total quantity of the blood will equal one-twentieth of the total body weight. This varies in given individuals and later researchers place it at a smaller total than was formerly supposed. Clinically, women can lose blood with less effect than men, and children are placed below these two. They are the poorest losers of all. The fat, the old and the weak are very susceptible to the loss of blood. The more rapid the loss of blood the more dangerous it becomes. Healthy individuals may recover without serious difficulty from a loss of 3 per cent. of the total quantity. The normal coagulation time is placed at from 3 to 10 minutes.

In children there may be a tendency to hemorrhage that is congenital and hence is habitual. If so they are known as bleeders or hæmophiliacs (as in one of my cases) or it may be only a temporary extravasation into the skin as represented in the pupuras, (my second case) or this may be a spontaneous tendency to hemorrhage from the stomach or bowel in the new born. This, (as in my third case) is known as *melena neonatorum*.

These conditions can hardly be classed as disease in toto but are more aptly termed a symptom complex. They of course have no direct relationship to each other and are presented here as three distinct types.

HAEMOPHILIA.

Bleeders or the habitual tendency to hemorrhage is the most hereditary of any known disease. Broadly speaking, there are two distinct types, either occurring spontaneous or from trauma. The vast majority show themselves before the second year of life. Boys are more susceptible than girls.

Hereditary.—Some times the transmission from parent to offspring can not be traced and yet again they have been traced through certain families for centuries. Females will transmit this tendency without themselves being bleeders. The male hæmophilic will procreate healthy offspring with non-bleeder females. Female hæmophilics, although in themselves free, will procreate bleeders from non-bleeder males. Non-hæmophilic males rarely procreate hæmophilic children. Or, in other words, daughters of hæmophilic males are exempt themselves but will transmit it, while sons are exempt and will not transmit it. Daughters may transmit this tendency to one or several of their children. If there are several daughters they all may transmit it. Occasionally a son will inherit direct from the father. The disease does not appear in the issue of sons of hæmophilic fathers who in themselves are not bleeders.

The causes of this condition are not known. There are many hypotheses. Immermann assumes an augmented quantity of the total blood. Lossen and Grandider assumes a fatty mixture of the blood. Virchow said it was due to the innervation of the capillaries. Others define it as a diathesis, and some put it even akin to scurvy. But they can all conclude that no definite pathology is manifest.

The study of the blood reveals nothing more than a diminished haemaglobin and microscopically a picture of severe anemia with poikilocytosis and nucleated reds. Sahli says the polynuclears are diminished relatively and absolutely and the quantity of the fibrin and physical properties are normal. Wright and Cabot say the white cells are persistently diminished and Coe says there is a constant decrease in the blood platelets.

The most constant and prominent SYMPTOM is the long-continued bleeding and difficulty of control. This is more characteristic than the severity of the hemorrhage. These hemorrhages may occur from the skin, from the mucous membrane or into a joint. They are usually preceded with a prodrome of headache, vertigo or mere lassitude. When the hemorrhage takes place in the joint it is usually soft, elastic and most often colorless, resembling a rheumatism so often that it is often confounded by the physician. Rarely but possible, however, this condition may produce an ankylosis.

The PROGNOSIS is of course bad; 60 per cent. succumb before the eighth year. The total mortality is said to reach 87 per cent.

CASE 1.—John W., 12 years old, white; was a first child, born at full term, natural labor. Was not nursed at the breast, but raised on condensed milk and the cereal foods. He grew fairly well but was never robust and from the earliest time showed extensive black and blue marks in the skin if struck or injured. When three years old had swelling of the joints which were diagnosed as rheumatism. They have continued every three or four months since and generally last from two to five weeks before recovery. He has had frequent nose bleeding and bleeding from the gums. The epistaxis would continue for two weeks or longer at a time. The same if he received a slight laceration of the skin. It would ooze for a week or more, usually of a bright red color. He has always had nocturnal enuresis and also diurnal up to his seventh year. He had pertussis at seven years and measles about six months previous. These were both mild attacks. He had no other of the usual children's diseases. His appetite was always good and the bowels regular. He was not specially nervous except when the joints were swollen. Had always been treated homœopathically.

He has one brother, age seven years, who has the same ten-

dency to bleed (I might add here that he was also under our care in the hospital for a time). One sister died at the fifth week, from what was termed a cold in the throat and strangulation. The father and mother are healthy and have always been so. There was no history of any bleeders in their families so far as they could ascertain. An uncle to the father died of tuberculosis, this being the only case.

By INSPECTION we find the patient is tall, thin, poorly nourished; color is fair, anaemia not marked, conjunctiva is slightly white, the lobes of the ears are good color. The teeth are very irregular and poor, having still many of the milk teeth present. The finger ends were normal and not clubbed; they were slightly blue but warm. He had a slight swelling of the right elbow and also of the right knee. The knee had every appearance of containing fluid. The circumference was $1\frac{1}{4}$ inches more than the left knee. The patella was raised and floating. It was not specially painful but there was some limitation in motion. There was some adenopathy in the inguinal region also the axillary and the epitrochlears. The liver and spleen were normal. The heart was hypertrophied, the apex beat being in the sixth interspace and in the nipple line. Auscultation was negative over the apex and pulmonary region. The pulse was 112 and the temperature 99.6. Phimosis was marked.

He was admitted to the ward on the 11th of January, 1909, and was discharged on the 9th of March the same year. On January 18th he had pain and swelling in the left elbow preceded by a temperature of 102.2 axillary. On the 25th he developed a rectal abscess which was opened with a hot cautery by Dr. Bigler on the 28th. This continued oozing for six days and the abscess healed successfully. During the three months in the hospital he had five different attacks of the swollen joints, not confined to the same joint, the left elbow being affected three times. Each attack was preceded by a slight rise in his temperature. The urine was examined a number of times and was always found to be negative. There was either an epistaxis or bleeding of the gums when the joints were not swollen and these conditions oftentimes overlapped. They did not seem to have any bearing one upon the other. The attacks of bleeding would continue for a period of from five to ten days continuously. The blood was examined a number of times. There were no marked changes from the pictures of the different authorities quoted above.

Now as to his treatment, we tried various things during his stay with us. The calcium chloride was given the most extensive trial of any remedy. This, however, did not seem to have any marked effect on his bleeding. It was given in five grain doses, three times a day. The one peculiarity in these cases is the drug cannot be given over a very long period at a time. It loses its effect after about the third day and seems to aggravate the condition. After a rest of about the same period it can again be given for three days. It is irritating to the stomach and should be given in large quantities of water after meals. Both cases left the hospital in about the same condition as when they were admitted.

PURPURA.

Various forms of purpura have been recognized for a long time, but they are now considered as all having, more or less, the same pathological basis. Briefly speaking, they may be classed as the simplex variety, or where the hemorrhage is into the skin. The rheumatica, where we also have the joint involvements; the abdominalis, where the gastric and intestinal hemorrhages are more prominent than the skin lesions and the hemorrhagic, where we have a hemorrhage into the internal organs but also the skin and mucous membranes as well. These several forms are not always distinct and separate but may coalesce in certain particulars.

It is rather one of the rarer diseases and increased in frequency after the third year; infants are almost immune. There does not seem to be any distinct cause for it. Osler classifies it as most likely of an infectious character. It usually begins suddenly, without prodromata, with the appearance of hemorrhagic spots under the surface of the skin, in different parts of the body, either a small round spot or maybe as extensive as a small dinner plate. The contour is rather irregular, partly round or oval, of a dark red color, a bluish or brownish tint. There is associated with it a general malaise, headache and a general debility even simulating the typhoid state. The temperature will rise to 102 or 103 and it usually runs an acute course without recurrence.

CASE 2.—Robert McKean, 5 years old: was treated for pertussis in November, 1907. No other diseases. Mother and father living and well; one brother died of marasmus. He

was admitted to the ward of the hospital on the 25th of September, 1908. On the 24th he came to the dispensary with a sore throat which was a simple tonsilitis. On the evening of the 25th he vomited a great quantity of blood and he was covered with bluish spots of various sizes on the trunk and extremities. He had no pain. The pulse was rapid and weak. There was a haemic murmur over the base of the heart and the left side of the heart was dilated. On the 26th he complained of difficulty in swallowing and there was noticed several red spots of extravasated blood on the roof of the mouth and one covering the left cheek and inside of the mouth. The tongue was coated brown. There were more spots appearing on the back and arms and legs. He also vomited about three ounces of fluid mixed with small blood clots. On the 28th the bowel movements were tinged with blood; there were a few large blood clots and the stool was very offensive. On Sept. 29th his time of coagulation was 20 minutes. I have the record of three blood examinations made by Dr. Fletcher—one on the 1st of October, one on the 13th and the other on the 26th. The first the haemoglobin was 20 per cent. taliquet, reds 2,400,000; whites 17,700; color index 0.40, and coagulation 20 minutes. The polies were 69 per cent.; the small lymphocytes 24 per cent.; large mononuclears 6, and eosinophiles 1 per cent.

On the 13th, the haemoglobin was 40 per cent.; the reds 2,970,000, the whites 7,200; the color index .66 and the coagulation 10 minutes. On the 26th the haemoglobin was 50 per cent., the reds 4,080,000, the whites 4,500, the color index .62, and the coagulation times as 6 minutes.

This case remained in the hospital for 61 days. The spots did not clear until his fourth week. The vomiting stopped after the second day and the bowels were normal after the first week. The temperature was never above 102 at any time, this continuing with slight variations up to the twenty-second day. His first symptom was that of a severe tonsilitis. It did not have the clinical appearance of a diphtheria and negative cultures of the Klebes Loeffler were obtained.

My third case is one of those known as MAELENA NEONATORUM. It is a disease of the new-born in which there is a discharge of blood from the rectum or by vomiting. They occur either as a symptom of a constitutional disease, as in syphilis or from sepsis and acute fatty degeneration, or they occur from the presence of more or less obscure ulcerations in

the stomach, duodenum or even the larger bowel. These ulcerations are caused either by an embolism, or from a hyperaemia due to an asphyxia or traumatism of birth.

The hemorrhages appear either as a bright red discharge; or as in my case, which is also the more common, of a dark or partly digested blood, mixed or independent of the fecal matter. With this discharge of blood we have the constitutional effects of the severe loss of blood, pallor, coldness of the extremities, weak pulse, cyanosis, etc.

HISTORY CASE 3.—Partenheim Baby. Mother 29 years old, fifth child; first was instrumental, others natural. Her second child died of marasmus, the third had dropsy of which it died of rather an obscure or vague origin so far as the mother could tell us. There was nothing abnormal with her pregnancy except that she had an albuminurea, with some oedema. This was present some little time previous to her labor and continued until her discharge from the hospital. After her labor she had to be catheterized a couple of times. The day following her labor and on the seventh and again on the twelfth day. She had no sepsis, or elevation of temperature except a very slight rise on her seventh day.

On the 28th of September, 1909, this child was delivered at the Hahnemann Maternity under the care of Prof. Edwin James, Jr. It was a natural L. O. A. and was completed in seven hours. Weight of $7\frac{1}{4}$ pounds and lost six ounces during the first twenty-four hours. On the second day there was a discharge of a small meconium and on the next day a large meconium. On the third day the bowel movement was large, yellow and with some curds. The fourth day was also two large, yellow curdy movements during the morning. The same afternoon there was recorded on the chart by the nurse as having passed a large quantity of meconium.

That night the baby was fretful and restless. There again was recorded the next morning as having passed a couple of small, curdy, yellow movements and as the breast milk did not seem to be of sufficient quantity the baby was given in conjunction with the breast a mixture of milk and water. On the sixth day there was passed a very large, dark greenish black bowel movement. Later in the day the baby became cyanosed; there was difficulty to breathe. Artificial respiration was continued by the resident, Dr. Post, and oxygen was also administered. The respiration continued, however, as very superfi-

cial and irregular for the next two days. The general condition of the child seemed to improve but the bowel movements continued as dark and blackish green; one or two daily, and rather large. The baby was seen about this time by Dr. Raue and myself and hypodermoclysis of a normal salt solution with one drop of an adrenalin solution was administered, once or twice a day. Panopeptone was given in very small quantities with each feeding. This later was not well retained and was discontinued. The salt sol. and the adrenalin were continued for five days following. During this time the bowel movements continued to contain blood but in a very less amount. They gradually changed to a light brown and continued so until the 20th of October, or until the child was nearly three weeks old. They then changed to a yellowish color. The child was much improved and was looking and sleeping better and was finally discharged on its 30th day, weighing seven pounds, three ounces, or six ounces less than at birth. It was taken out of the Hospital against our advice, and at the risk of the mother, but she reported to us in the Dispensary a couple of times later and the baby was then improved. I have not seen or heard from it since. A blood examination was made on the 10th day of October by Dr. Fletcher. It showed a haemoglobin of only 12 per cent. Fleishel; a red cell count of 1,400,000, a white count of 24,800. The differential was as follows: Poly 50 per cent., small lymphocytes 39.2 per cent., large mononuclear 4.8 per cent., esionophiles 5.6 per cent., basophiles .4. There was counted three nucleated reds, and numerous blood plates; they being increased. The red cells were pale and there was some poikilocytosis.

This was a very interesting case from its rarity first. So far as I know it is the only case occurring in the service of the Maternity of Hahnemann. Landau, who has made a very extensive study of these cases and has written quite an extensive and interesting monograph on it says they occur about once to every thousand births. It is interesting from the very low percentage of haemoglobin, being in this case only 12 per cent., and most of all it is interesting from the fact that it recovered but *not* so interesting from the fact that we could not hold a post mortem to ascertain the exact cause. We concluded the asphyxia in this case was due to the loss of blood and not the reverse. We were able to establish the presence of occult blood in the stool long after the stools were apparently normal.

THE RELATION OF THE SIGMOID COLON TO AFFECTIONS OF THE LEFT
UTERINE ADNEXA.

BY

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WE utter a truism when we say that the normal relation of organs to each other makes for health, and conduces to physiological functioning, and conversely, that such relations can be varied only within narrow limits without disturbing the equilibrium between health and disease. The application of this principle is the motif for the present paper.

Organs that are normally movable are necessarily more liable to change their relations to each other than those that are fixed in position, they also suffer more from the effect of such changes. All the pelvic organs come under the latter classification. The uterus and its adnexia; the cecum and appendix; and the sigmoid colon, move within a well-defined radius for each, and we are forced to the belief that they must remain free to just such an extent in order to perform their physiological function. In this connection we note that the peritoneum fulfills a most important office apart from furnishing the structures that hold the organs in place, and limit their arch of motion, by supplying a surface of contact that prevents the normal change of relative position from becoming permanent, in other words, that hinders fixing intra-abdominal organs in abnormal relations to each other. The peritoneum therefore is the paramount factor in holding the movable pelvic organs in unnatural relations to each other, by virtue of the adhesions that may form between its surfaces, when inflamed.

I will now ask you to consider the conditions that favor establishing abnormal relations between the sigmoid colon and the left uterine adnexa, the nature of such relations, and the consequences that may ensue therefrom.

In health these two differently functioning organs lie in juxtaposition, and when, because of the operation of either they come in actual contact, they move apart under the stimulus of physiological requirements. So much for the healthy function, but if we will contemplate a sigmoid colon chronically overloaded with feces, we realize how disturbed the direction of the large intestine may, and in point of fact must, be-

come. The canal itself is enlarged, and losing contractile power becomes more and more gathered on its mesentery. This forces the sigmoid over towards the median line and against the uterus, which it displaces, and also brings it in permanent contact with the left ovary, and Fallopian tube.

The process may stop here, and result in nothing more than dislocation of the gland and its ova duct, and pressure on these, to which the group of symptoms may be referred. But more frequently the overloading of the colon being gradual, weakens its walls, and there results local infection, an infection caused by the colon bacillus, and possibly other bacilli escaping through the stretched musculature, and peritoneal covering. Sub-acute peritonitis follows, and the organs that lie in contact with the infected area of the sigmoid contract adhesions with it, adhesions that are sure to become permanent, and to fix both intestine and adnexa in abnormal positions, and circumscribe their range of motion.

It is possible this state may develop in the reverse order, for the initial infection to proceed from the ovary, or tube, and that the intestine may become secondarily affected, but we must consider this an unusual sequence, inasmuch as instances of a misplaced sigmoid and adherent adnexa are more frequently found without evidences of primary ovarian inflammation, and gross adnexal diseases exist without adhesions to the sigmoid colon.

The acquired conditions of the sigmoid colon that favor its displacement, and predispose to establishing adhesions with the ovary and Fallopian tube, are frequent, but fortunately not always active in that direction. Constipation, the bane of women, and the despair of the gynecologist must be held responsible in the first degree. The average woman cannot be impressed with the importance of regular bowel evacuations, and will allow trivial matters to interfere with the demand which nature makes. And we should not place too much credence on her statement that the bowels move regularly every day, such a record being entirely consistent with constipation, and with the intestine not being emptied, for repeated inattention to the desire to stool results in packing the sigmoid colon and the rectum with feces, followed by distention and paralysis of their walls. Continued pressure from above finally forces a tunnel through the fecal mass, and there is presented an intestine lined with gluey, pasty feces, the center of which is occupied

with a canal that serves the purpose, very inadequately it is true, of discharging the fecal overflow. When a patient assures me that her bowels are perfectly regular, and that she has two or three stools every day, I feel certain that the state of the rectum and sigmoid I have described exists, and I am further convinced that the patient is in reality constipated, when I learn that the stools are small in calibre, and discharged with difficulty, even though they may not be formed. Given these data, the finding is invariably an overloaded, misplaced sigmoid colon. Discharge of mucous may follow stool in long standing cases, and indicates sigmoiditis, or proctosigmoiditis as serious local complications.

The sigmoid, being capable of considerable distention without protest, may become displaced and contract adhesions with neighboring viscera without sign, therefore we will not expect to receive the first evidence of disease in a group of symptoms that point to the intestinal canal as the source of trouble. Symptoms connected with the uterus and adnexa are the first to arrest attention.

If the abnormal relations of the sigmoid and ovary proceed no further than displacement and pressure, the phenomena of inflammation not entering into the clinical picture, we may well believe the case is a recent one, functional disturbances will be limited to transient discomfort referred to the left pelvis, and temporary derangement of the menses, but if adhesive bands form that fix the uterus,—the natural position of which is suspended mobility in antiversion,—it matters little in what position, its function as related to circulation cannot be successfully carried on, and in consequence there follows uterine catarrh, dysmenorrhœa, and sometimes menorrhagia.

But what is more to our present purpose, if the left appendage is bound to the distended sigmoid the clinical picture contains all the symptoms and phenomena that belong to a pathologically functioning ovary and tube, together with those that attend ovarian irritation, or oophoritis. I believe this combination of etiological factors determines the greater frequency of left adnexal diseases, of the ovarian and tubal affections that are characterized broadly as inflammatory: and I further believe that we will rarely find diseases of the left pelvis, unless traceable to some definite cause acting by way of the genital canal, that are not connected with a chronically over-loaded

sigmoid colon, and the phenomena to which such a state gives rise.

A patient presents herself with symptoms indicating the left uterine adnexa as the seat of her malady. Unless the lesion is a gross one, pyosalpinx, ovarian abscess, or the like, what do we find? In the first place, pressure over the site of the ovary usually elicits no more sensation than would be caused by a like examination in any other region of the abdomen, but we are apt to find a movable sausage-shaped body lying on the brim of the pelvis, sometimes in the iliac fossa, or movable to it, that is quite sensitive. This is the distended, and displaced sigmoid colon, which in health and when empty is not distinguishable by palpation.

In the second place, a vaginal and bi-manual examination shows fixation of the pelvic organs, not that of pelvic cellulitis with its plaster of Paris characteristic, but the uterus is more or less displaced, frequently the fundus is drawn to the left side, and with the corresponding adnexa is fixed with bands that can sometimes be demonstrated by touch. The ovary cannot always be palpated, and the examination conveys the impression that where pain is elicited, it is by touching periovarian structures rather than the gland itself. I have frequently observed the most sensitive spot to be well to the left of the uterus, and outside of where we expect to find the ovary. Upon opening the abdomen this has proved to be an adhesive band between the ovary and the sigmoid colon at its most acute flexion. This particular pain point has become almost diagnostic with me of the pathology of an overloaded sigmoid colon, and consequent affections of the left ovary and tube. On the whole, however, the local findings do not correspond to the degree of ovarian suffering of which the patient complains.

The upper part of the rectum, and as far as the examining finger can reach is found full of easily indented feces, and we are able to cause this mass to impinge upon the finger by pressure made through the abdomen, with the left hand.

The question now for us to determine, as of paramount importance in treating the case, is just how far the condition of the sigmoid is responsible for the adnexal involvement, and where first to attack the disease, by way of the colon, or by way of the ovary and tube.

Every one who has had experience in treating the pelvic diseases of women will concede that we cannot hope to effect a cure unless the intestinal canal is functioning freely, and by

so doing accelerating pelvic circulation, and relieving undue pressure upon neighboring organs and structures. This indicates the first step in treatment even though we may not be willing to accord to the sigmoid colon the position of a primary cause. Make sure by any means that in the individual operator's experience is likely to insure the best results, that the lower bowel is free, and that the fecal lining of the canal is entirely broken up, and removed.

At this stage little can be accomplished by acting from above, that is, with cathartics; high enemas must be relied on to empty the colon. My preference is for glycerine in the proportion of one ounce of glycerine in one pint of water. This breaks up the feces better than anything that I have used, and at the same time excites contraction of the intestinal muscles by irritation of the mucosa.

It may require several days to accomplish this satisfactorily. The rectum becomes irritated after repeated enemas, and the patient had better be allowed to rest. My instructions to the nurse, and we should insist upon one being employed for this purpose, is not to attempt too much at first, the principle of procedure being to empty from below, gradually reaching the upper limit of the empaction. Therefore the long tube, which is the best instrument to use, should be carried only up to the fecal mass, making no attempt to pass into it, and the enema should be thrown against it. So by successive stages the sigmoid colon, and the rectum can be emptied.

The improvement in the ovarian symptoms following unloading the colon is marked, and may be so decided as to warrant the conclusion that no further treatment will be necessary, but if the altered relations of the intestine and the ovary have become chronic, and developed the stage of inflammatory adhesions, more than the removal of pressure will be required to effect a cure. Local vaginal treatment with tampons, here iodine yields excellent results, though it may have been used before unloading the sigmoid without avail, and the internal use of iodide of potassium, or potassium chlorate may be necessary. Such means failing, operative interference will be the dernier resort. Some gynecologists have reported success from the use of abdominal massage, combined with vaginal manipulation, in the breaking up of these adhesions, but I have never seen anything in this treatment that gave me confidence in its efficacy.

Affections of the ovary and tube that have their initial cause in chronic overloading of the sigmoid colon, furnish the most successful cases for conservative surgery, for frequently neither the gland nor its ova duct are diseased beyond the power of nature to repair when the exciting cause is removed.

Abdominal surgery more than any branch of our art illustrates the impossibility of laying down hard and fast lines of procedure, for the unexpected is at any moment liable to occur, but the larger number of adnexal diseases that accompany abnormal conditions of the sigmoid colon if necessitating an abdominal operation, do not require more than the conservative procedure of separating the bands of adhesion that fix the organs in their unnatural positions, and prevent their normal movements.

The technique need not be dwelt upon, individual requirements will be suggested as the operation proceeds. But while these operations rarely present any great difficulties, save possibly those that attend carrying on our manipulation deep within the pelvis, they should not be undetraken by those unfamiliar with abdominal surgery, or by the inexperienced, for successful treatment depends in a great measure upon the judgment of the operator, and the compelling exactness of his technique. In the first place, unlike an ordinary oophoro-salpingectomy, the entire field of work must be under the observation of the eye, not alone of the finger. That is, when adhesions are to be broken up, we should see them; and more important still, the exposed areas must finally be covered with peritoneum, frequently necessitating nice manipulation to guard against recurrence.

Second, we may be obliged to operate on the sigmoid itself. At the rectosigmoidal junction there is liable to occur a kink which must be straightened out. It may be necessary to shorten the mesentery—sigmoidopexy, or possibly, though I have never encountered a case where such an extreme measure was required, it may be thought justifiable, with the object of preserving the ovary and its duct, to resect the sigmoid. Such a procedure might—possibly—receive sanction when the loop of intestine through prolonged distention, persistently prolapsed, and falling, rested on an otherwise healthy ovary and tube. It will thus be seen that questions of grave importance may arise in operating on these apparently simple cases, problems that require the judgment and experience of the practiced abdominal surgeon to solve successfully.

CAUSTICUM.

BY

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(Read before the New York State Homœopathic Medical Society.)

It seems almost like a work of supererogation to present a paper on causticum, at this late day, before a body of homœopathic physicians, but my excuse is that it was at the request of the chairman of the Bureau of Materia Medica, and beyond that, for the reason that it is one of our most valuable remedies, and as even the best of us will sometimes get into a rut, it is one that is not infrequently overlooked, or neglected to the detriment of our patients, in some serious conditions.

It is peculiarly a homœopathic remedy, and moreover of a somewhat peculiar uncertain chemical constitution, and is altogether unknown to the old school, and looked upon with suspicion by many of our own. It was introduced by Hahnemann, I imagine, in an effort to combine in one drug the action of lime and potash, and with more or less success, the potash element, however, seeming to predominate. Hahnemann found, after trial, that it was a deeply acting remedy, so much so that he reproved it, and adopted it as an anti-psoric or constitutional remedy, and published it in his *Chronic Diseases*.

It is prepared by taking recently slacked lime, mixing it with a solution of bi-sulphate of potash. This mixture is distilled, and the clear liquid resulting is the causticum in solution. It seems to be a hydrated caustic solution of lime and potash, and is a combination of the two earths in rather uncertain proportion.

The action of causticum is exerted in two or three principal directions, but besides these, is useful in a variety of cases.

Most especially, it has a profound effect upon the nervous organization, with tendency to paralytic conditions, varying from a gradual and general decrease of muscular and nervous strength, to actual paralysis, as of the oesophagus and throat after diphtheria, in which it is one of our most valuable remedies, ranging with gels., lach. and cocc., and others in this dangerous and not infrequent disease.

Paralysis of one side of the face after exposure to dry, cold winds, is a very strong indication for this drug; in this, it re-

sembles acon., which has the same condition, though perhaps causticum would rather follow acon., after the acute condition tended to become chronic.

In ptosis, or paralysis of the eyelids, it is one of the principal remedies, with gels., sep., and graph.

For paralysis of the vocal cords, with aphonia, after straining or overexerting the voice, it is the principal remedy. There is not only great hoarseness, and even loss of voice, but a feeling of weakness in the larynx, as if it were impossible to speak.

In paralytic weakness of the bladder, spurting of urine when coughing or sneezing, or straining. Enuresis of children, especially in cold weather, and during the first sleep, like sepia.

Paralytic conditions of the lower limbs, great lassitude, and muscular relaxation; indescribable fatigue and weariness of the body.

Constipation of a paralytic nature, with strong urging and straining, stools pass more easily when in a standing position. The rectum sometimes becomes full, and the faeces pass unnoticed. With aloes, children pass little balls of faeces unnoticed.

Upon the eye, causticum causes not only ptosis and heaviness of the lids, but dimness of vision, with black specks before the eyes, or like a veil, a flickering, or spots before the eyes. Paralysis of the optic nerve.

Causticum is one of our best remedies in chorea; twitching and jerking of the muscles; cramp of the muscles, starting and jerking of muscles day and night in nervous girls; chorea, even at night; convulsive movements after fright.

Another form of nerve manifestation in causticum is neuralgia: especially of the face after exposure to cold, dry winds, the neuralgia often followed by paralysis.

Epilepsy about the time of puberty, from fright, or exhaustion after long exposure.

A rheumatic or arthritic tendency is another marked condition in the action of causticum, with severe darting, drawing pains, with a tightening and shortening of the tendons, resulting in temporary or permanent contraction, and even ankylosis of the joints; accompanying this is a rheumatic state with severe pains aggravated in dry weather; the pains are ameliorated by heat, but the patient is in a peculiar condition, and can endure neither cold nor heat.

The joints are enlarged and deformed; both muscles and joints are affected; and all complaints, both pains and aches, are aggravated in dry weather.

Severe aching and drawing pains, and stiffness in the back; very stiff and painful when rising from a chair, like *rhhus*, which, however, has a constant restlessness, while *causticum* is restless at night. *Rhus* and sulphur resemble *causticum* in arthritic conditions, also *guiac.* in arthritis, with distortion of the limbs.

Causticum has a very characteristic action of the mucus membranes; it produces a hard, racking cough, which shakes the body, and is very exhausting; there seems to be plenty of mucus, but the patient cannot seem to cough deep enough to reach it. The cough, however, is relieved by a swallow of cold water; with the cough there is a pain over the hips, and often an involuntary spurting of urine, as in *nat. mur.*, and *sepia*. Rawness and soreness in the larynx and trachea, hoarseness and loss of voice with the catarrh; severe hoarseness worse in the morning. With *phos.* there is hoarseness, but it is worse in the evening, and there is great soreness of the larynx, and tightness of the chest; *sang.* has a severe catarrhal cough, with burning under the sternum; *pop. can.* has an acute catarrh with much hoarseness.

Nasal catarrh with a tough gluey mucus; crusts in the nasal cavity, or thick, yellowish-green discharge.

Catarrh of the middle ear with noises and roaring in the ears; reverberation of the voice in the ear; deafness; great accumulation of wax in the ear.

Causticum is useful in general conditions characterized by great weakness, depression and melancholy, as from the effects of long-continued grief, anxiety and care, especially with paralytic tendencies, faint-like weakness or sinking of strength, with tremor.

The typical *causticum* patient seems to be of a sallow complexion, dark hair, depressed and weak, and disposed to look upon the dark side of things, in fact, is a decidedly pessimistic individual. Melancholy mood, a feeling as if something was going to happen to herself or family; fear of death; anxiety keeps him awake at night; complaints after prolonged anxiety or grief; tired out from business worries.

Severe headache with rheumatic or gouty conditions, scalp feels drawn tight; rheumatic headache so severe as to cause nausea; eyelids feel heavy.

Rawness and burning in the throat; constant swallowing from a sense of fulness in the throat.

Appetite vanishes at the sight of food; she sits down to the table hungry, but the sight or thought of food takes away her appetite, common with pregnant women. Kali carb. has empty, all-gone feeling, with aversion to food. China. canine hunger, but loathes the sight of food. Thirst for cold drinks, with aversion to water; desire for beer, pungent things, smoked beef, aversion to sweets.

Sensation in the stomach as if lime were slaking there.

A swallow of ice water relieves many of the symptoms.

Constipation, with ineffectual desire for stool, like nux vom.

Much pain and straining, with red face; stool passed better when standing; paralytic weakness of rectum. Hæmorrhoids swollen, impeding stool; rawness, soreness and burning, worse when walking, and when thinking of them. Moisture about the anus; fissures in anus, fissures and hæmorrhoids burn like fire; excessive itching in the anus.

Involuntary urination when coughing, with women.

Urinate so easily he does not know it is passing; if in the dark he has to feel before he is sure. It also has retention of urine from nervous excitability, or from straining; rhus, retention after a chill; ineffectual desire to urinate, with passage of only a few drops, with burning and soreness.

Hoarse voice, worse in the morning, getting better towards night. Carbo veg. worse in the evening. Hoarse and rawness, relieved by raising a little mucus. Sudden loss of voice; paralysis of vocal cords; chronic hoarseness after an acute laryngitis. (Dros).

Hard, racking cough, with soreness and rawness in the trachea; cannot cough deep enough to reach the mucus, and struggles at it until exhausted. Cough relieved by a swallow of cold water; when coughing, involuntary urination.

Causticum has also an action on the skin, one of its strong characteristics being the production of warts, occurring in crops, especially on the hands and face. I recall a recent case of this in a lady who was very much annoyed by the large number of warts which disfigured her hands; they were of all sizes, and increasing in number, and were completely removed in a short time by causticum.

The main characteristics of causticum are briefly: the tearing, drawing pains in the muscular and fibrous tissues, with deformities about the joints; the aggravation from dry, cold winds and cold weather, causing neuralgia, and often at-

tended with paralysis; the sensation of rawness, soreness, and burning in the mucus membrane; the fissures about the corners of the mouth, the wings of the nose, corners of the eyes, and the anus, with intense itching and burning.

The cough with involuntary urination, with cough relieved by a swallow of ice-cold water; and the tendency to great weakness and muscular paralysis.

PHYSICIANS' BUSINESS METHODS.

BY

WM. F. BAKER, M. D., PHILADELPHIA, PA.

THE occupation of the physician is a peculiar one. While he does a far larger proportion of his business on credit than persons of any other occupation, yet he is very poorly situated for keeping his accounts systematically. The merchant has his books open on his desk, and enters the necessary charge before he waits on the next customer. The physician, on the contrary, waits upon his patrons at their homes, and when he returns to his office there are often calls to other places awaiting him which he must attend at once, or, if not, he is often more anxious to hastily look up the literature on a puzzling or critical case than he is to make record of what he has earned. Often he comes in so tired, hungry and sleepy, that he must attend to his own needs rather than to his books. Thus several days may pass without his books being written up, and then he has such confused ideas of the events past that many charges are not entered at all and none are legally entered, since the law requires the original entry to be made within twenty-four hours after the service is rendered. A pocket account book of original entry seems to be the only practical method.

The merchant is usually to be found, at the regular place of business. The customer asks how much is due and makes payment. The physician, on the other hand, can seldom be found in his office, and that fact gives the debtor an excuse for spending his money for other purposes, after having called at the physician's office to settle his account and not finding him in. The physician must be prepared in some way or other to show his patron the state of his account whenever asked for it—on

the street, on the country road or at the patient's home. A pocket account book of original entry, again, is the only feasible plan.

But the ordinary pocket visiting list has been tried and is found to be no record at all in the eyes of the law, since the services are not described, but are indicated by a series of arbitrary signs, which have to be interpreted. The law does not allow the doctor to explain the charges by verbal testimony; when the party against whom they are made is no longer living; and of course, since records are of no earthly value to the physician's family after his death. On this account thousands of dollars are lost every year by foolish and shiftless doctors who depend upon such slipshod methods of preserving what is often the only form of life insurance they ever carry for their families—their book accounts.

The law requires that an account book of original entry must show in plain language and figures, which can be read by judge and jury without personal explanation, the name of the person against whom the charge is made, the name of the person for or to whom the services or supplies are rendered, the date, the description of services, and the charge must be definitely carried out in dollars and cents. The entries must also be made while the transaction is still fresh in the mind—not later than the next day.

Perhaps a reference to actual cases will make the matter more clear. In a case reported under the name of *German's Estate*, in 14 Weekly Notes of Cases, Judge Ashman, of the Orphans' Court, makes valuable suggestions as to the proper form of book entries and also points out the deficiencies of existing methods. He says in part:

"The rule of evidence which introduces a tradesman's books of original entries to prove his sales, is permitted to override the principle that a party may not manufacture evidence for himself, on the ground of convenience. . . . For the reasons which justify its use in case of a merchant, it has been so far extended as to embrace, perhaps, the books of any person whose business is not in money, but is of such a nature that its transactions can be itemized with the precision with which a sale may be recorded. . . . A physician's book may (and the judge uses the word "may" as meaning "should") cover a daily entry of each visit, with the name of each patient, a list of the medicines furnished, and the price which

custom has fixed for this particular service. Such a record will comprise all the incidents of certainty of time, person, labor and value, and each entry will be complete in itself."

Speaking of books in the case under consideration, the judge says: "His diary or visiting list, as a physician, contained on each page a list of names of patients, with tally marks opposite, in columns which were headed separately with the day of the week; the name of the month appearing at the top of the page and the date of the year on the cover. One column at the end of the space for each week was headed amount. Preceding these lists, as a sort of preface to the book, was a 'Table of Signs.' This table embodied a series of hieroglyphics and figures, which were intended to denote visits made and to be made, and visits repeated or to be repeated; consultations proposed or made; services at the office, visits at night, medicines furnished, etc. It is quite clear that entries patterned after this fashion, could serve at best, only as memoranda from which to make more formal charges. . . . Allowing the utmost latitude to the plea of convenience and necessity, the law cannot tolerate self-proving an entry of services which can be translated only by means of a glossary. Such a writing would be as unintelligible to an ordinary jury as a 'Hebrew Bible' to a deputy sheriff."

The late Judge Hanna, also of the Orphans' Court, had this to say on the subject, in the case of Kelley's Estate, in 5 District Reports, 263:

"A due regard for physician's own interest should lead him to keep a book of original entries, showing a charge for attendance, with the date, the name of the person against whom the charge is made, and the amount of compensation for the services or attendance. If this has been done, the book if properly and regularly kept, supported by the testimony of the claimant or his clerk who made the entries, will be *prima facie* evidence, and thus far sustain the claim. But, on the other hand, the physician in this case relied upon what is known as a 'visiting list' to prove the number of visits, and the parol testimony of experts to prove their value. Such a book containing simply a name, accompanied by a succession of hieroglyphics, to be explained and translated only by the person making them, is clearly inadmissible as a book of original entries. It is a matter of surprise that physicians are so lax in this respect, and the present case furnishes an illustration of the danger

I have seen men of exceptional ability as diagnosticians, men of large medical experience quake and go to pieces on the witness stand in such a small matter as the collection of a modest bill for services rendered, was the subject of fire from the lips of an attorney of moderate ability. Why? Had the doctor made a mistake or was he not entitled to it by reason of his poor accounts?

The question then resolves itself to this—either the doctor must be willing to lose out or accept a compromise offered in any contest. Beyond this he dare not go at the risk of being a target for the battering ram of a noisy attorney's questioning and in some cases I have seen ridicule. I do not mean to stamp on our professional life any appearance of commercialism, but a few suggestions would possibly be in order as to a simple and accurate, although fundamental and perhaps trite, as to the keeping of one's accounts in such shape as to be intelligible and readable, capable of comprehension at a glance or, in other words, in keeping with the essential principles of good business.

Many systems have been devised, simple and elaborate, new systems are continually springing up, but by adopting the elementary principles to your own system will no doubt save lots of time, lots of ridicule and make a better general impression.

Last as to the records and statements concerning the illness of the patient. This will include the records of the nurse, or the family attendant. These notes should consist of not only the physical condition, but in a recent case in which I was interested, there was a contest of the will and the mental condition was the one inquired into during my daily attendance which lasted for a period of four months.

In this particular case I was questioned as to the hour of visit, length of visit, mental condition during visit, and physical signs and symptoms noted during each visit.

PARENCHYMATOUS NEPHRITIS.—In the *Deutsche med. Wochenschrift*, 1909, No. 46, Ribbert says: Inflammation in parenchymatous organs, such as the kidney, is present in the interstitial connective tissue alone, and there is no such thing as parenchymatous inflammation, degenerative changes alone being shown. These do not belong to the inflammatory processes, which, consequently, do not affect the entire organ, but have in it merely an anatomic site. The specific regressive processes in the parenchyma act not at all, or only indirectly as morbid factors, so that the already injured parenchyma may be injured yet more.

THE TREATMENT OF APPENDICITIS.

BY

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(Read before the Luzerne County Homœopathic Medical Society.)

IN choosing this subject for a paper, I fully realize it is one on which there has been a great diversity of opinion among the members of our profession. It is one which admits of discussion, and I hope you will discuss it freely and generally. It is by this means, of thrashing a subject out among ourselves, that we are to arrive at definite conclusions, increase our knowledge of subjects, and oftentimes derive a benefit for our patients also. I will say further that I have approached this subject from an entirely unbiased point of view, after giving it careful thought and consideration, reading after some of our most prominent authorities; therefore, if I express certain views which may seem to you radical, it is not with any desire to be radical, but simply an honest expression of the views which I believe to be correct.

Appendicitis, as we all know, is an inflammation of the vermiform appendix. The appendix is a long, narrow, musculo-membraneous tube, with a blind extremity, varying in length from 1 to 9 1-2 inches, and in diameter, from one-quarter to one-fifth of an inch. Its average length is 3 1-2 inches. It usually branches off from the inner, or inner and posterior wall of the cecum, about one inch below the ilium, as it enters the large bowel.

The opening into the cecum is guarded by a valve of mucous membrane. Usually the base of the appendix is nearly opposite McBurney's point, which is situated midway between the anterior superior spine of the ilium and the umbilicus. The position of the base varies but little in different subjects, but the direction in which the organ points is too variable for classification. In over one-half of the cases, however, it points either up and in, or down and in.

While we wish to speak principally of the treatment of appendicitis, it is necessary for us to fully appreciate certain etiological, histological and pathological points, as well as the symptoms, diagnosis and clinical course of the disease,

before we are in a position to understand the principles of treatment.

The appendix is covered with the meso-appendix, which is a fold of the peritoneum reflected from the bowel and covering the appendix for one-third or two-thirds of its length, or sometimes its whole length, or it may be entirely absent. This holds the appendix in position and contains between its two layers the blood vessels, nerves and lymphatics of the appendix. The appendix contains all the coats of the large bowel. The serous coat entirely surrounds the appendix, except where the folds of the meso-appendix approximate each other. It contains a longitudinal and circular muscular layer. It is the spasmodic contraction of these muscles trying to expel an invader that is the cause of appendicular colic. If the invader is expelled, the colic ceases and the patient is well again, as it had not yet caused inflammation. If the muscles are not successful in their efforts, the colic terminates in a true appendicitis.

The sub-mucosa is connective tissue, supporting blood and lymph vessels and nerves. The mucosa lining the appendix is made up of tubular glands and lymphatic follicles, with a single layer of columnar epithelium resting on a thin basement membrane.

At the present time it is safe to say that in every case of appendicitis the omnipresent exciting cause of the disease is infection with a micro-organism, and the predisposing cause is anything that increases the number or virulence of the bacteria, or that reduces the resisting power of the appendix.

The most important, because most frequent infecting organism, is the *bacillus coli communis*. The large bowel is its natural habitat, and while normally it is benign, under certain circumstances it becomes virulent and causes an appendiceal infection.

The infecting agencies are, in the order of frequency after the colon bacilli, the *streptococcus pyogenes* aureus and albus, *streptococcus*, *pneumococcus*, tubercle bacilli and *actinomyces*. These facts, as to the infecting organism, explain why some cases are mild and recover, and why others become septic or even fulminating and if not interfered with, would prove fatal.

The clinical course of the cases depends on the type and

virulence of the infecting muco-organism, and the lack of resistance of the appendix due to the predisposing cause. The streptococcic infection is the most severe, and is often the agent of a fatal peritonitis, although the virulence of this coccus is very variable, which directly influences the degree of the sepsis. It has been shown that the micro-organisms become very virulent when retained in the appendix under pressure. Any cause producing venous stasis in the appendix is sufficient to increase the infection, as erosion of the mucosa being all that is necessary, under these favorable conditions, to admit the infection to the inter-cellular spaces of the appendix, causing an inflammation which may remain catarrhal, or involve all the coats, causing rapid gangrene and perforation.

In a mild case of staphylococcic infection the peritoneum becomes covered with a thick fibrinous exudate and thus lessens absorption and saves the patient from an over dose of bacteria and their products. This exudate paralyzes peristalsis, but in a short time it is thrown off with the peritoneal endothelium, leaving an abraded rapidly absorbing peritoneum, causing sudden collapse, frequent loose movements, an anxious expression, and soon death, between the evening of the fourth and the morning of the sixth day. The action of the colon bacillus is midway between the streptococcus and the staphylococcus. At times it produces slight irritation, moderate fever, considerable sero-purulent exudate and a gradually increasing disturbance of the endothelial covering. The process advances slowly and there is a tendency to localization by peritoneal adhesions.

Under certain conditions, however, which we little understand, the colon bacillus has a powerfully irritating effect on the peritoneum, produces rapid erosion and rapid absorption. It may produce gangrene of the peritoneum and even of the intestinal wall. This is a rare but extremely fatal type of the action of this bacillus. In these cases there is great physical exhaustion, lowered arterial tension, sunken eyes, low muttering delirium, which is a very different picture from the high fever, rapid pulse, hyperaesthesia, tympanitis, anxious expression, active delirium and all the symptoms of acute streptococcic intoxication.

After one or more acute attacks of appendicitis there often

remains a subacute or chronic inflammation in which cases the lumen is partly closed by adhesions, the mucous membrane is fibrous in appearance and may contain one or more calculi; there may be adhesions about the appendix also. It was believed for years that collapse was the immediate manifestation of perforation of the organ; but this is not the case. It is now known that collapse is a symptom of septic intoxication, and always a late symptom as far as the clinical course is concerned.

We will now consider the symptomatology with a view to a diagnosis. Murphy states that in 98 per cent. of the cases, the symptoms occur in a certain order, and when that order varies, he questions the diagnosis. The order of symptoms is as follows:

- 1st, sudden and severe abdominal pain;
- 2nd, nausea and vomiting, usually three or four hours after the onset;
- 3rd, general abdominal sensitiveness, most marked at or about McBurney's point;
- 4th, fever in from two to twenty-four hours, but it is not constant; and
- 5th, leucocytosis.

If nausea and vomiting, or fever, precede the pain, you may be sure it is not appendicitis. When fever alone precedes the pain for a few days you may have typhoid fever with an ulcer in the appendix.

Remember, that with a cessation of pain there is not a corresponding cessation of danger. Fever is not absent in a single acute case in the early stage, and is due to absorption of the products of infection contained in the appendix under pressure.

Eisendrath says there is an almost constant triad of symptoms:

- 1st, Pain, sudden, severe and often colicky.
- 2nd, Nausea and vomiting; and
- 3rd, Localized tenderness and muscular rigidity.

The pain is usually general at first, but soon localizes in the right iliac region except when the appendix is in an abnormal position; when the position of the pain is correspondingly altered.

Vomiting accompanies the pain as a primary symptom, or

follows it after three or four hours. If nausea and vomiting persist, or reappear at a later period, they are danger symptoms of a beginning peritonitis.

Tenderness and muscular rigidity, as a rule, are most marked over the right iliac region, and are best elicited with the shoulders elevated and the thighs flexed. Tenderness is superficial and manifest even on slight pressure; in fact the examination should never be forcible. The muscular rigidity being due to a reflex condition is a very valuable sign, when it accompanies pain, vomiting and tenderness. Don't forget rectal and vaginal examination also.

In a majority of cases there will be an increase in the pulse rate with the onset of the pain, from 80 to 100 for a number of hours. If it shows a gradual increase in frequency after the first twelve hours it is an ominous sign. A steady rise in rate to 110, or later, to 120, or higher, especially if jerky in character, is of great value in the diagnosis of a beginning peritonitis; especially if nausea and vomiting continue, or recur after cessation, and the area of rigidity and tenderness increase and are combined with tympanitis.

Eisendrath, however, reports a case of extreme spreading peritonitis, following appendicitis, in which muscular rigidity, tenderness and tympanitis were characteristic, but the pulse was 66, and the temperature 99.6.

The rise in temperature usually occurs within two or three hours after the onset of an attack; mild cases only to 100 or 101, but even this is inconstant. If the fever persists and increases gradually during the first 48 to 72 hours, it generally means an encapsulated abscess. The temperature dropping suddenly, especially with a rise of the pulse rate and increased rigidity, is significant of gangrene or the beginning of peritonitis.

Persistent fever, with apparent recovery, means a complication, like pylephlebitis, or sub-phrenic abscess. We will not consider leucocytosis which is also a valuable sign. Tumor, as an early sign, is of little value, as rigidity makes deep palpation both difficult and dangerous. The contracted edge of the rectus muscle may feel like an inflammatory mass, or the omentum may wrap itself around the appendix and form a palpable tumor.

After the acute symptoms subside, a tumor may be felt

through the relaxed muscles. We should always approach a suspected case bearing in mind the conditions the patient might have, and exclude each condition before a positive diagnosis is made. Differentiate acute gastro-intestinal disturbances, as typhoid fever, intestinal obstruction, gastric ulcer, duodenal ulcer, acute cholecystitis, acute salpingo-oophoritis, renal colic, pyonephrosis, acute pancreatitis, twisted pedicle, in ovarian or uterine tumors, cases due to Meckle's diverticulum, torsion of the spermatic cord of a normal or undescended testicle, inflammation of the abdominal portion of the vas deferens, embolism and thrombosis of the mesentery vessels, acute pleural or pulmonary inflammation, Dietel's crisis due to the kinking of the ureter in a movable kidney. We have not time to go into a differentiation, but simply mention these to refresh your memory as to what you may have. Before turning to the treatment of acute cases I wish to say a few words about chronic appendicitis.

The patient has had an acute attack which was not operated upon and possibly was not diagnosed. He has, from time to time, attacks of pain in the right iliac region, just severe enough to direct his attention to it. It is often a dull aching pain, keeping him from working a day or two at a time. There may be digestive disturbances with mucous stools, flatulency, or alternating constipation and diarrhoea. There is no rise of temperature and no leucocytosis. There may also be sharp colicky pains due to adhesions. Tenderness on palpation is most marked at or near McBurney's point, and you can often feel an indurated mass in the same region. After you have made a thorough, systematic examination and excluded everything else, you might possibly have and you feel sure of your diagnosis of chronic appendicitis, the case is one for operation. Clinical experience is teaching that the clinical picture is out of proportion to the extent of the pathological lesion. It is also true that the completeness of cures, in these cases by operation is one of the most gratifying in the entire field of abdominal surgery.

We now come to the most essential part of the subject, as far as practical purposes are concerned, and that is *the treatment*.

In the first place we, as general practitioners, come in contact with, comparatively, a very few cases annually; while

surgeons in large cities see and operate many hundreds every year. Their observations and opinions are, therefore, valuable, and we must be guided by them if we wish to treat cases with success. Gentlemen, we surely should view this subject from outside our own limited sphere of observation. True, we may have been lucky and have had all our cases from the 85 that would recover from one attack without operation. But look out for breakers ahead, for some day, if we practice long enough, we are going to be unlucky and get a case or so from the 15 that would not recover without operation; and it certainly should not be necessary for us to have a death from this disease in order to appreciate the necessity of an early operation in many cases in order to save life.

According to the statistics that I have seen, from 80 to 85 cases out of a hundred recover from acute attacks under medical treatment, and the remaining 15 to 20 per cent. do not. Accepting this as true, we must bear in mind that every medical recovery is liable to one or more recurrences of the acute attack, and is also liable to chronic appendicitis, and, I believe, the majority of them ultimately come under the surgeon's knife, if they do not succumb before it is recommended. Murphy reports the death of a patient during his seventh acute attack, and also states that sixty per cent. of his interval cases had had more than one acute attack.

If it were possible in the beginning of the attack, in every 100 cases, to pick out the 85 medical recoverable cases and treat them medically, then to pick out the 15 non-medical cases and treat them surgically at once, the treatment would be simplified and there would be but an occasional death. This is not possible, however, and never will be possible. The important question is, how can we tell whether or not an attack is going to be serious? We see case after case recover from the attack without operation, but here and there a case dies without an operation, or is operated too late to save life. How can we tell which is going to be which so as to advise our patients for their best interests?

It has been shown by Bernay, of St. Louis, and many other surgeons, that it is impossible, in the beginning, to diagnose the pathological condition that will follow, and often, not until the abdomen is opened. That it is impossible, in the beginning, to tell whether the case will terminate in a simple

catarrhal affection—relieved by the discharge of its contents into the cecum—or whether it will become a suppurative case with perforation. We cannot tell whether or not there is an enterolith or other foreign body present to produce perforation and gangrene, and at the *onset*, we cannot tell what kind of an infection we are dealing with. This being the case, it must be true that every case not operated upon in the beginning of the attack, is open to the possibilities of becoming serious.

It is true that many do not become serious and apparently recover; but we must remember that he is always liable to another acute attack, and when one comes, if he is again treated medically, the surgeon may be called to give him a last chance. I believe hundreds of cases die yearly, just from this conservatism, that conserves the appendix at the expense of the patient. We, as general practitioners, see these cases first, and usually are directly responsible if an operation is done too late. This responsibility, gentlemen, is great; but it is also unnecessary, and one which I do not care to assume. It is extremely embarrassing, in this day, for a physician to be caught with a moribund patient on his hands, without having advised early operation, which in all probability, would have prevented a *serious* case. Osler says, "so impressed am I that we physicians lose lives by temporizing with certain cases of appendicitis, that I prefer, in hospital work, to have the suspected cases admitted directly to the surgical side." The general practitioner does well to remember that the surgeon is "often called too late, but never too early." Osler also says that there is no medical treatment for appendicitis that will in any way control the course of the disease.

In view of the varying pathology, and the variety and degree of virulence of the infecting bacilli, it certainly is an extremely difficult problem to be able to say that this or that line of treatment cured the case, when the natural untreated course of the disease is so variable.

Dr. James M. Anders says, "whether imminent danger of perforation exists or not, that physician who is called to a case of appendicitis should at once request the services of a competent surgeon." Few surgeons subscribe to the doctrine that all cases demand operation; but since a celiotomy may be necessary any hour thereafter, the surgeon should help

answer the important question, when is it necessary to operate?

The physician who does not pursue this course, falls short of his duty, both toward the patient, and the surgeon on whose skill he relies to remove the source of danger. Anders also says, that with rare exceptions, prompt surgical aid should be recommended. A waiting policy, and medical treatment, are perilous in doubtful cases.

Einhorn, who is a pupil of Ewald, gives the following indications for surgical interference:

1st—Diffuse peritonitis and perforation.

2nd—Appendicular abscess showing that fluctuation is present.

3rd—Protracted cases with slight septic symptoms and probable abscess.

4th—If there is no improvement after three to five days of treatment.

5th—Sudden rise of temperature for 24 hours after the first few days of the illness.

6th—A very frequent pulse.

7th—If tumor increases in size after the fifth day of the illness.

8th—Persistence of pain for several months after the acute attack; and

9th—In the recurrent type if the attacks have been quite severe, or if they have followed each other at short intervals.

Now, gentlemen, you can readily see from these indications that the clinical course of the disease is well advanced, pathological changes well marked, with probable expansive adhesions, the patient's system more or less infected and the best and safest time for operation long passed. If appendicitis goes on to perforation or suppuration before operation, either the patient or the physician is at fault.

In order to show the low mortality of interval operations, Dr. S. C. Stremmel, of Macomb, Ill., mailed a postal card asking two questions to 1000 of the leading surgeons of the United States. The questions were:

1st—How many uncomplicated cases of appendicitis operated between attacks have you lost?

2nd—How many have you operated?

Five hundred and seventy-nine answers were received and

60,486 cases were reported, with 119 deaths; a mortality of a little less than one-fifth of one per cent.

Murphy reported 2068 of all kinds with one death.

Deaver reported over 2000 cases with one death.

The Mayo Brothers 1657 cases with two deaths.

Dr. Craig, of Boston, said his experience led him to believe that, except as the result of some unusual accident, there should be no mortality in the interval operation. Dr. Stremmel received two answers out of the 579 saying that it was never necessary to operate.

Dr. Lenfestry, of Mt. Clements, Mich., reported 150 cases treated with large doses of castor oil without a death; and declares there is no need for operation. Dr. Mimrod, of Augusta, Ga., stated that he cured all of his cases, 50 in number, without operation. Most of the replies stated that they preferred the interval operation, but had difficulty in persuading patients to be operated on when apparently well.

We will assume then, that the safest plan to operate is in the interval. We must remember, however, that in a number of cases, out of every 100, there would be no interval if not operated during the primary attack. The very early operation is practically the same as the interval operation, except perhaps easier on account of the absence of adhesions.

If all cases were operated very early in the attack, or during the interval, the mortality would be extremely slight; and out of the 15 unfortunates who would not recover under medical treatment, 14 4-5 would recover. The question arises, what are we to advise when we see a case for the first time during its actively increasing inflammatory stage from the second to the fifth day? There may be a local abscess, active inflammation around the appendix, or the beginning of a local or general peritonitis.

Shall we advise operation in these cases? Yes, by all means. The operation should, however, be limited and brief. Simply opening the abscess, and relieving the pus tension by a large drainage tube, removing the appendix only if it is easily accessible and easily amputated. Be careful to make the least possible disturbance to adhesions and infected tissues. If the patient is overwhelmed with toxins, even if the peritonitis is general, make a simple incision and introduce a large drainage tube to the bottom of the cavity, even if this is the cul de sac of Douglas.

Do not irrigate, and do not sponge or manipulate intestines. It is a fact, in the perineum as well as elsewhere in the body, that pus will not absorb to any amount, unless under tension. If we relieve this tension, by incision and drainage, and the dose of toxins has not been so overwhelming as to cause death, the case will probably recover. That is, this intoxication is like a dose of alkaloidal poison; if the immediate effect can be overcome, inhibition of absorption and prompt elimination will prevent a fatal result. After this operation, the patient is put to bed in the Fowler semi-sitting position, (35 to 45 degrees) and large quantities of saline solution introduced into the rectum continuously by the drop method. The large tube in the cul-de-sac, Fowler's position, and the Murphy enteroclysis seem like little things, but they are life savers. In these cases whiskey, strychnine, camphor or caffeine may be useful, and streptolytic serum should be tried. Echinacea, phenol, bupivacaine, rhus, arsenic, and the snake poisons may also be useful. Do not treat these acutely inflamed cases on the expectant plan, but relieve the suppurating focus and drain. In the last five years, Murphy operated 47 cases of perforative, diffuse, general septic peritonitis, in the active stage, with but two deaths. Contrast this result with Van Lennep's statement of 15 years ago. "When the peritonitis is diffuse and suppuration general, a favorable result is scarcely possible."

Why this change? Fifteen years ago we did too much and patients died just as surely as when we did not do enough. We were taught to flush, and wipe. In other words, to thoroughly diffuse the poison and to remove the endothelial covering to the bowel, leaving a highly absorbing surface to suck up the poison like a sponge. No flushing, no manipulating or wiping; free drainage from the bottom of the cavity, the Fowler position and Murphy's method of introducing saline into the rectum, have revolutionized the surgery of the appendix in septic cases.

If we see a case, for the first time, in the stage of decline of the inflammation, after the fifth day, should we advise an operation? The answer is again, yes; but the necessity is not as immediately urgent as in the latter class. If the patient live until this stage, and is not moribund, we can feel sure that the destructive process has been overpowered by local resistance; and pus, if present, is encapsulated, or has emptied into

the bowel, or is slowly spreading in the direction of least resistance. In other words, nature has been kind, and prolonged his life thus far. This condition may continue for some time, the patient always being liable to accidental rupture, thrombophlebitis and embolism. In this class of cases the pus is always an element of danger and we should not feel content until it is drained.

To sum up the proper line of treatment I would suggest the following, in the onset: Put the patient to bed immediately and keep at rest on the back. Total abstinence of all food by the mouth, and later, if necessary, rectal alimentation. I believe a purge of oil, magnesia citrate or rochelle salts, can do nothing but good if used while the infection is still in the appendix, as this may cause the contents of the organ to empty into the cecum, and the case promptly recover. On the other hand, if given late, when the infection is outside the appendix, the increased peristalsis may spread the infection and make it more general. An ice-bag over McBurney's point, usually relieves the pain sufficiently to make morphine unnecessary in the great majority of cases. It may be necessary to use it after positive of your diagnosis and when you have your eyes open to the proper interpretation of the symptoms. It should never be used over an extended period, however, for the reason, if it seems necessary, an operation is more indicated. Morphine is the favorite remedy of Einhorn, but it does not influence the progress of the disease, simply relieves one symptom, which is an important guide to its progress.

Belladonna is most frequently indicated and prescribed. If at the end of 24 hours, we cannot say with certainty our patient is better, we had better demand an immediate operation, as delay is more dangerous.

In cases that are particularly severe from the onset, the indications are that the infecting agency is especially virulent and we had better advise an operation as soon as the diagnosis is made. A case, to be a favorable one, should show signs of improvement early, if at all.

We may give them the best care and most approved medical treatment possible, but if the infecting agency is virulent, the resistance of the appendix reduced, and an erosion of the lining occurs, nothing will prevent gangrene and perforation, but early removal of the appendix.

The final results of patients operated for appendicitis are very gratifying indeed, and they usually recover entirely and are in as good health as they were before taken sick. Certain complications occur after operations, at times, and most always after late operations. Some of these are peritonitis, ileus, pylephlebitis, thrombo-phlebitis, hemorrhage, fistulas, hepatic, phrenic and other circumscribed abscesses.

To me, however, the complications and possibilities of non-operated cases, far outweigh those of an early or interval operation. In other words, it is less risk to the patient to be cut, than to wait. I would rather have 85 cases operated early, and unnecessarily, than to let one of the 15 cases die because operated too late; and this in the best interests of the patients.

We will not go into the technique of the early and interval operation; suffice it to say that in from 10 to 14 days he is ready to leave the hospital well, in the great majority of cases. This, to my mind, gentlemen, is the ideal treatment for appendicitis, and if it was universally followed, results would be ideal also.

Now just a word of caution as to the procedure in pus cases. Don't sacrifice the life of the patient endeavoring to remove the appendix if it is imbedded and difficult to remove. A one sitting operation may apparently show courage, on the part of the operator, but often is extremely dangerous to the patient, and he is the one we want to benefit. It is our duty to conduct him to a cure with the least possible sum total hazard to his life, regardless of the number of operations required, or his or the surgeon's personal convenience, likes or dislikes.

In preparing this paper I might add that I consulted the following works: Eisendrath's *Surgical Diagnosis*, Deaver's *Surgical Anatomy*, Goodno's, Osler's and Ander's *Practice of Medicine*, Bartlett's *Clinical Medicine*, Einhorn's *Diseases of the Intestines*, Sajou's *Cyclopedia*, Bryant's *Operative Surgery*, Morse's *Post Operative Treatment*, *The New York Medical Journal* and last, but the most important of all, Murphy's *Article on Appendicitis*, in *Keen's Surgery*.

THE SO-CALLED "DISEASES OF MEN."

BY

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MANY are rightly jealous of the attention given to tuberculosis. To them it seems wrong not to have so broadened the field of this educating crusade so as to include some of the other infections that prey on the public health.

The walls of a great majority of the toilets frequented by the poor bear advertisements of "Sure cures for all diseases of men." The publicity thus allowed these framed guaranteeing advertisements is misleading. Our poor people are at the mercy of these lavatory advertising quacks. Public Health Commissions know this,—yet the law is such as to allow of its continuance.

Throughout the State, our public hospitals support genito-urinary clinics and dispensaries for the relief of the poor and the preservation of the public health. Unless the State acquaints the poor with the existence of these and other clinics, as she has done with her tuberculosis clinics, she will not accomplish the purpose for which she is supporting these clinics. Our clinics for the poor are not properly advertised.

If it is possible for individuals to post up lavatories with impossible promises, why cannot the State in the interest of public health post the same lavatories with notices of the nearest public clinics? Clinics that offer honest, conscientious, modern, scientific treatment for the cure of the patient and proper advice for the protection of those with whom they may come in direct or indirect contact.

THE BACILLUS INFLUENZÆ: CHOLOCYSTITIS.—In four cases of cholecystitis, Knina found the influenza bacillus in pure culture as the causative factor. Whilst in other bacillary diseases, mixed infection is very frequently noted, the bacillus of grippe was always without any accompanying micro-organisms.—*Wien. R. Woch.*, 1909, No. 36.

EDITORIAL

THE AMERICAN INSTITUTE OF HOMŒOPATHY.

The approach of Summer recalls to our minds the fact that it will soon be time for the Annual Meeting of the American Institute of Homœopathy. The meeting this year will be held at Pasadena, California, July 11th to 16th.

It is seldom, indeed, that there have been as many attractions, aside from those of strictly scientific interest, to induce physicians to attend an Institute meeting. The delightful climate and the beautiful natural scenery of Southern California are world-famed, and this, together with the many scenic attractions of a trans-continental trip, as outlined in the official itinerary, will no doubt make every member anxious to be present if possible. The members of the local profession have made unusual preparations for entertaining their guests, and the social part of the meeting will be more than usually attractive.

We are assured that the hotel accommodations for guests and rooms for the meetings of the various Bureaus and Sections of the Institute have been provided. Dr. Ward, as president of the Institute, and the profession in California in general, have certainly exerted every effort to contribute to the success of the meeting. We have no doubt but that every member who attends will feel fully repaid both in pleasure and in scientific advancement for the time and expense of the trip.

MEDICAL LIBRARIES.

THE interest and activity in the medical societies of a community, or of a school of medicine, is a fair index of the progressiveness of the medical men of the community, or of the school, which they represent.

To increase the usefulness of the medical societies of the homœopathic school and to make them more valuable to the members of the profession, is therefore a very important step

in strengthening our ranks and in advancing the principles for which we stand.

Most of our societies are sadly in need of a good library. There is nothing which tends more strongly to add to the value of a medical organization than the possession of a good library. It is something which is of common interest to all; it is valuable both to the older men and to the younger men. There may be differences of opinion as to the political management of a medical organization; there may be reasons why certain groups of men are more fortunate than others in securing positions of influence in hospitals and colleges, thus giving them greater opportunities for study and experience; but all can make use of a medical library to the fullest extent without feeling that his opportunities in this direction are any less than those of his medical confreres. Thus the interest of all members tends to center about the library. Not only is this true, but the very atmosphere of a well conducted medical library tends to diffuse higher ideals throughout the whole society, and to increase a respect for that which is scholarly and scientific in the practice of medicine.

It seems to us that there is an urgent need for the establishment of a first-class medical library that will be up-to-date and accessible to all physicians among the homœopathic practitioners of Philadelphia.

This also would bring up the question of maintenance of a suitable room or rooms, centrally located, in which the library could be kept, and which would also serve as the meeting place of the various medical societies connected with the profession.

Once a suitable place is selected, and a nucleus of books and periodicals are gathered together, the task of developing a first-class library will be begun. It does not require much work to facilitate the growth of a library, as there are many factors which tend to perpetuate it.

By very little effort the libraries of physicians could be secured after their death with little or no expense. Duplicate books could frequently be exchanged with neighboring libraries for ones that are wanted. In fact, the American Association of Medical Librarians conduct a clearing-house for just this purpose.

There seems to be very little reason why the homœopathic

profession of Philadelphia should not have a high-class, useful library. The library of the College of Physicians, of Philadelphia, is probably one of the greatest, if not the greatest, of its kind in this country. We are informed that under the conditions of Mr. Carnegie's recent gift to this institution all physicians have the privilege of consulting the books contained in the library. Those of us who have visited the library have always been received with every consideration, but there is always a feeling that it is not our own, and we believe that this feeling expresses the views of many other physicians.

It is to be hoped that our County Society, or some other representative organization, will take this matter under consideration and make every effort toward instituting a library of the type referred to at the earliest possible date.

A NEW LINE OF CANCER RESEARCH.

It was probably a surprise, even to medical men, to learn that President Taft, on April 9th, sent a message to Congress in which he requested that an appropriation of fifty thousand dollars be made for the purpose of investigating cancer in fishes.

It has been learned during recent years that cancer is a very common disease among fishes, and that they are specially liable to cancer of the thyroid gland. This condition not infrequently becomes epidemic in hatcheries, especially among the trout family, and constitutes an obstacle to the artificial raising of fishes.

It has been found that the introduction of ova from an outside hatchery into one previously free from cancer may be followed by the appearance of the peculiar tumors in many of the fish raised from the imported ova, and that the fish of the indigenous stock kept with the diseased ones also frequently develop the same condition.

Gaylord, of the New York State Cancer Laboratory, of Buffalo, has made quite an extensive study of fish cancer, and has pointed out the fact that the area in the United States in which human cancer is most prevalent is identical with the area over which the trout family is distributed.

It is in the hope that the study of this disease among the fishes may throw some light on the effect of heredity and

contagion in spreading the disease among human beings that President Taft has suggested the appropriation from Congress.

The rapid advances that have been made by this disease during recent years have made it little less than a national scourge and it is eminently fitting that a part of the national funds should be expended in an effort to throw light upon the cause and transmission of this fatal malady.

INVOLUTION OF THE PUERPERAL UTERUS.—Goodall has studied this subject most thoroughly and written a voluminous article, profusely illustrated. Some of his conclusions are as follows: The uterus renews all its arteries after each pregnancy; the renewal always consists in the building of a new vessel within the lumen of the old one. In the case of a small vessel being built within one of very large calibre the new vessel will have three completely new coats. In the case of a vessel which must reduce its calibre, the new vessel will build for itself a new intima and incorporate as much of the media of the old vessel as is required to complete its walls. The walls of the old vessels which have become superfluous slowly undergo in normal cases destructive changes and are completely absorbed. Advancing age and acute and chronic diseases retard these changes. The differences between the parous and nulliparous uterus arise from the incompleteness of destruction and absorption of waste products. The parous uterus of a young woman may so completely change as to resemble the virgin uterus. In later years and under the influence of disease the more highly specialized tissues have a strong tendency to be replaced by the less specialized, i. e., muscle by elastic tissue. The arteries of the cervix undergo the same changes as those of the uterus. The veins of the uterine body and of the cervix are everywhere reduced by a growth of hyaline tissue in their walls and not by organization of clot. Under the influence of age and disease this hyaline growth is replaced partly or wholly by elastic tissue. The syncytial cells play no part whatever in the production of these venous changes. The large colorless masses in the mucosa of the uterus of women who have borne children are the remains of atrophic elastic tissue and not the remains of organized blood clot. When the elastic tissue of the parent vessel remains unabsorbed, it becomes either atrophic or hypertrophic, and when the latter, it will remain as the sclerosis of pregnancy. This unabsorbed elastic tissue may arise from the elastic intima, from that of the media and adventitia, or from elastic tissue invading the inter-arterial spaces. The muscular cells of the uterus and cervix undergo fatty degeneration with slow absorption. Many of the muscle fibres of the uterus disappear completely, especially in the media of the large vessels. The uterine arteries and veins probably undergo a slight reduction in their lumen in a manner similar to that of the arteries of the uterine wall.—*Amer. Jr. Obs.* Vol. 60, 921.

THEODORE J. GRAMM, M. D.

GLEANINGS

STYPTIC PROPERTIES OF BROMIDES AND CHLORIDES.—R. van den Velden, in examination of the blood after the administration of halogen salts as presumable hemostyptics, finds increase of coagulability from Na Cl, whether given by mouth, subcutaneously or intravenously. This effect is not obtainable by the addition to blood in vitro of the saline solution. The bromides are like the chlorides in those reactions. The action of the halogen is to be considered as the result of an alteration in the degree of concentration of the blood. This condition develops not alone from a pouring out of water into the gut. Of greater import is hydremia, for, with the water from the tissues thrombokinase passes over into the blood. Because of these data, the old-fashioned salt therapy (Nace) is shown to have an experimental basis. The probably best administration is the intravenous. In 60 cases where it was employed in humans, there were no injurious consequences nor any "salt fever." The patients were all adults. Ten to thirty grains of common salt, *per os*, easily developed symptoms of irritation.—*Zeitschrift f. exp. Path. u. Therapie*, B 7, H 1, S. 290.

SCROFULA: TUBERCULOSIS.—Virchow taught that scrofula and tuberculosis were, histologically, very different processes, but Koch was able to demonstrate their etiologic relationship, having located the bacillus tuberculosis in caseated lymph glands, etc. But, that the well known scrofulous alterations in skin and mucous membranes were tuberculous in nature, was determinable only by the modern methods of research, particularly by means of Pirquet's cutaneous reaction. Tuberculotoxic reactions are very similar to the scrofulides, and Moro and Doganoff have, therefore, enunciated the hypothesis that, in the secretions from mucous membranes, extremely minute quantities of tuberculotoxin which continue the condition of chronic irritation. Hence, the supposition is easily arrived at, that the hypersensitivity of derm and mucosa present in scrofula, whereon, as a basis, the pathognomonic symptom of the disease, the scrofulide, develops, is nothing else than a condition of intoxication due to encapsulated tuberculotoxin due, of course, to the tubercle bacillus. In pure scrofula the tuberculous focus is latent, and those scrofulides only which are to be considered as tuberculotoxic alterations of the integument, demonstrate the existence of tuberculosis. Scrofula is not only curable, but offers also relative protection against later tuberculous infection.—*Th. Escherich. Deut. med. Woch.*, 1909, No. 38.

THE TOXICITY OF THE POTATO (SOLANIN).—Dr. v. Haselburg, in an exhaustive article based upon the data afforded by a voluminous literature and his own researches, has come to the conclusion that it is much nearer the truth, and, nowadays, easily demonstrated that the harmless tuber, be-

cause of an abnormal content of solanin, is never, nor at any season of the year, responsible for the poisoning of those ingesting it. Bacteria of various species, chiefly of the coli commune group, as well as the protens and other putrefacient micro-organisms multiply enormously, and within a short time, on warm potatoes, demonstrated also in the case of the typhoid germ by Pfuhl, and by these bacteria a toxin is generated which has caused serious, but hitherto not fatal, phenomena. In the army regulations regarding food are found the following directions: No prepared foods, especially potatoes, are to be kept for any length of time at higher temperature. Further precautions, other than that just mentioned, have not been needed. Solanin, therefore, is not to be held responsible for the widespread poisonings occasionally reported, but bacteriologic investigation should be immediately begun, and animal experimentation, according to Dieudonne, initiated as a means of research always giving positive results.—*Medizinische Klinik*, 1909, No. 32.

SYPHILITIC DISEASES OF THE NERVOUS SYSTEM.—The inadequacy of the treatment of early syphilis is shown by the fact that syphilis of the nervous system is encountered in those who have received more or less prolonged treatment for the initial infection. Investigation of a number of cases of syphilis of the nervous system showed that the treatment of the majority of these patients had consisted in mercury, usually given in pill form, and of potassium iodide, often in large doses in the early stages of the disease. In spite of the teachings of the syphilographers syphilis is being treated in a desultory and inadequate manner with mercury, while more reliance is placed on potassium iodide as a curative agent. Adequate treatment of syphilis necessitates employment of the Wassermann reaction in order to regulate the dose of mercury and to determine the duration of its administration. As disturbances of the alimentary tract do not necessarily indicate that too much, or even enough, mercury is being absorbed more reliance can be placed upon the inunction and hypodermic treatment. The author is convinced that not infrequently the use of potassium iodide early in the treatment of syphilis is deleterious and that its value in the treatment of syphilis of the nervous system is limited to gummata involving nervous tissue.—Joseph Collins, *Jour. of the A. M. A.*, April 23, 1910.

CHARLES D. FOX, M. D.

CHANGES IN THE DIAMETERS OF THE LENSES IN A CASE OF COMPLETE ALBINISM.—The case, a girl of three years and eight months, presented a low alternating, convergent squint, lateral nystagmus, constant photophobia, and depreciated vision. Her health was good, her mind bright and active. There was absence of uveal pigment, each iris was very thin, showing only the sphincter and radiating fibres. Through the thinned irides the entire circumference of the lens margins could be plainly seen with the naked eye. The diameter of the pupils under $\frac{1}{2}\%$ eserin were 1.5 mm., in bright light 2 mm., and in a darkened room 4 to $4\frac{1}{2}$ mm. With the accommodation at 40 cm., the transverse diameter of the lens was 9.5 mm., two hours after the instillation of 1-20% eserin it was 9 mm., and two hours after the use of 1% atropin it measured 10 mm. The refractive er-

rors were corrected with a dark amber lens, and the vision continued to improve for a considerable time, while the photophobia largely disappeared.—Dr. George F. Libby, *Annals of Ophthalmol.*

WILLIAM SPENCER, M. D.

CILIUM IN THE ANTERIOR CHAMBER.—The patient was a man 60 years of age. Twelve years previous he had been struck with a splinter in the left eye. He suffered little inconvenience, except impairment of vision, at the time, and the eye remained quiet until two weeks before the consultation, when he struck his head against a beam as he turned quickly to the left. This was followed by a mild irido-cyclitis in the injured eye. When seen these conditions were present: The lens was absorbed, leaving a partial posterior synechia. Irido-cyclitis was present. About the center of the cornea was a small leucoma, from the posterior surface of which a cilium extended along the axis of the eye. The bulbous end was in contact with the posterior surface of the cornea, while the point was firmly attached to the remains of the capsule in the center of the pupil. When the head was turned laterally the bulbous end floated freely in the aqueous. An incision was made in the upper quadrant of the cornea and the cilium was removed with the iris forceps. The irido-cyclitis promptly subsided and the vision improved.—Dr. W. A. Barr, *Jour. of Ophthalmol and Otology.*

WILLIAM SPENCER, M. D.

EXPERIMENTAL TRANSFERENCE OF OPTHALMIA NEONATORUM (Free from Gonococci, but with Epithelial Inclusions) TO MONKEYS.—At the International Congress in Budapest, 1909, Heymann showed preparation of a gonoblenorrhœa of the newborn with epithelial cell inclusions which could not be differentiated from trachoma inclusions. Prowazek and the writer, however, could find these inclusions only in those cases of ophthalmia neonatorum in which no gonococci could be demonstrated. To prove that these cases were allied to trachoma, he selected two cases of ophthalmia neonatorum free from gonococci, but with epithelial cell inclusions, and inoculated three macaqua apes and one pavian.

In one macaqua ape a mild conjunctivitis was observed at the end of six days, and in the scrapings were found several Prowazek bodies. In the other two monkeys no reaction ensued and no inclusions could be demonstrated. In the pavian, after an inoculation period of four days, a rather severe purulent conjunctivitis set in, and on the seventh day numerous Prowazek inclusions were found.

These experiments show that it is possible to transfer to monkeys the virus obtained from a case of ophthalmia neonatorum free from gonococci, but containing cell inclusions. Inasmuch as the clinical course of a positive inoculation resembled a trachoma inoculation, the idea suggests itself that such cases of ophthalmia neonatorum are cases of conjunctival trachoma of the new born.—D. K. Lindner, *Annals of Ophthalmol.*

WILLIAM SPENCER, M. D.

NODULAR KERATITIS.—The patient, a gardener, aged 28 years, had had good vision until two years previously, when sight began to fail without inflammatory symptoms. He had been treated at Moorfields, where the

Calamette test had been made, with a positive reaction. The clinical picture was typical, differing from the author's former cases in that the opacities lay deeper and consequently caused less elevation of the epithelium and in that they were less irregular and more oval in form. Physical examination gave evidence of "latent active tubercular lung and glandular affection." In several preparations of the subepithelial foci, granular tubercle bacilli were demonstrated by employing the Much stain. The points of interest in the case, confirming the author's previous observations, are that the affection occurs principally between the second and third decades; that it is not congenital, that histologically it consists of a focal, entirely superficial parenchymatous inflammation and is in every way analogous to the changes in Schleich's experiments by inoculating the cornea with tubercle bacilli of attenuated virulence.—Dr. Wehrli, *Annals of Ophthalmol.*

WILLIAM SPENCER, M. D.

THE AIR OF THE OPERATING ROOM AS A FACTOR IN THE INFECTION OF WOUNDS.—Robb (Cleveland) has made a series of culture experiments for the purpose of determining how far the air may be assumed to be responsible for infection in a wound. It will be remembered that years ago the Lister carbolized spray was kept playing continuously upon the field of operation in the belief that infection often reached the wound through the air. The moist occlusion dressing was based upon the same belief. Later it was thought that the medium of the air was a negligible source of infection, and a noted operator said he would be willing to operate anywhere provided he could prevent infection from contact. The results of Hunter Robb's experiments are briefly as follows: 1. Floor: It appears that the presence of some antiseptic in the wash water used upon the floor made a marked difference in the number of bacteria falling on the plates per minute. 2. Fan: Whether the electric fan made any difference or not could not be determined. 3. Walls: The condition of the walls appeared to make the greatest possible difference. This was at first overlooked, and later discovered by accident. Ordinarily the head nurse in the operating room took great pains to have the enameled furniture, the floor and all other accessories in spotless condition, while the dust is allowed to collect on the walls for weeks. In one series of experiments it was surprising to find almost no colonies in spite of the fact that the floor had been mopped with only ordinary water and the electric fan was running. On investigation it was found that a few days previously the walls had been scrubbed thoroughly. Further experiments showed that this was a most important factor. 4. People in the room. Even with the dirty walls, and with no preparation of the floor, and the fan running, practically no colonies fell on the plates when they were exposed in a room on Sunday, when no one was stirring around. 5. The finding of *B. pyocyaneus* in a room in which a case infected with this organism had been operated on three weeks previously is of interest. 6. The series exposed in the uncared for pathological laboratory showed that the moulds prevailed and there were not many bacteria, but *B. coli* was found. 7. In the summer season when the windows are more or less open the number of bacteria present seem to be more numerous than in the winter season or when the windows are

closed. Thus far the work done seems only to emphasize what we knew before, namely, that an aseptic technique is the necessity of paramount importance.—*Amer. Jr. Obs.* Vol. 40, 451.

THEODORE J. GRAMM, M. D.

RUPTURE OF THE UTERUS DURING LABOR.—Lobenstine's article is based upon the cases observed in the New York Lying-in Hospital. Among 60,000 patients this accident occurred 46 times completely, in 29 the rupture was incomplete, and in 3 instances the vaginal wall was ruptured without actual laceration of the uterus. The complete ruptures were more frequent than the incomplete, probably because the lesser grades of severity pass unnoticed at the time. Rupture may occur at any time during the first or second stages, or even during the later months of pregnancy. It occurs more often in multiparæ than in primiparæ. This observation is explainable by reason of the general health of multiparæ among the very poor being not as a rule as good as among women who are pregnant for the first time; and also in a considerable number of women who have borne children the uterine musculature has been weakened by inflammation, by scars of former incomplete tears, or by operative scars. The etiological factors in the 46 cases of complete rupture comprised pelvic contraction, transverse presentation, Cæsarian section scar, hydrocephalus, when the accident occurred spontaneously. In traumatic rupture, the accident was associated with internal podalic version, high forceps, accouchment force and embryotomy. The most frequent site was in the lower uterine zone, and may be transverse or longitudinal. The rupture was three times more frequent on the left than on the right side, and twice as often on the anterior as on the posterior wall. Most of the spontaneous cases were due to the imprisonment of the lower portion of cervix between the presenting part, especially the head, and the pelvic brim. The premonitory signs are severe, prolonged contractions, increasing in severity, the presenting part not making the proper advance; increasing frequency of the pulse; the patient becoming more and more worn and haggard. The uterus becomes tonically contracted and rotated on its long axis; a sharp line of demarcation is observed between the upper and lower zones; the round ligaments become very prominent, especially the left. The active symptoms of rupture consist in the patient, presenting the above symptoms for some time, suddenly crying out in great anguish during a severe uterine contraction because of an agonizing pain in the uterus, and usually feels that something has given way. All uterine contractions then cease immediately, and there may be profuse internal hemorrhage. On vaginal examination the presenting part is usually retracted; rupture may possibly be felt, and the child escapes wholly or in part into the abdominal cavity where it may be recognized through the abdominal walls. The symptoms of shock develop. Death may occur within a few hours, sometimes very suddenly, or the patient may endure for a day, having shock, vomiting and bloody urine. In the more favorable cases, either operation or simply tamponage the symptoms gradually improve to recovery. This accident of course calls usually for surgical treatment. Unfortunately at best the mortality is high.—*Amer. Jr. Obs.* Vol. 60, 819.

THEODORE J. GRAMM, M. D.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY A. LEIGHT MONROE,
Miami, Florida.

SOME HOMOEOPATHIC REMEDIES IN DISEASES OF THE EYE.—Dr. Dean W. Myers has given a most excellent summary of this subject in the January issue of the *University Homoeopathic Observer*. We are glad to note that Dr. Myers' experience as a specialist has strongly confirmed his faith in the efficacy of the homœopathic remedy.

In the application of the homœopathic principle to the cure of disease there is no field offering greater possibilities than that of the eye. Its delicate structures, so susceptible to the slightest irritation from without or within, make it quick of response to the beautiful actions of attenuated drugs. Then, too, it frequently presents many of the most characteristic symptoms calling for certain remedies. The heat, burning, aching, swelling, and redness, of *Aconite* accompanied by intense hyperemia coupled with dryness and burning and great sensitiveness to air are symptoms frequently accompanying many eye disturbances. The eyeball, especially the upper half, is sensitive if moved and feels as if protruding from the orbit, and strange as it may seem this sensitiveness may be relieved by stooping. The patient has a feeling as though looking through a veil, while the nervous characteristic of aconite is usually present. The eyes are sensitive to light and this symptom will be found frequently in acute aggravations of chronic conditions which are accompanied by hyperemia, heat and dryness. In traumatic conditions of the eye, aconite is the first remedy to be thought of. Muscular asthenopia accompanied by spasmodic closure of the lids usually following intense use of the eyes in bright lights and accompanied by great congestion of the conjunctiva both ocular and palpebral with dryness and much burning will often be relieved by aconite.

In contrast to aconite conditions, *Allium cepa* presents a different picture. Profuse lachrymation with redness of the eyeball and abundant coryza. It has the same burning and smartness but profuse flowing of tears especially in the evening, aggravated by warmth, differing thus from the aconite conditions. The patient complains of something in the eye with a great tendency to rub it. The disturbances about the eyes where these remedies are indicated are usually accompanied by catarrhal conditions such as acute rhinitis and pharyngitis.

In *Apis mel.* the oculist finds a remedy whose value is almost inestimable. The picture of *apis* is frequently seen. When the characteristic burning

stinging, and shooting pains of the drug together with swelling and œdema are encountered, it will be found to be curative in such conditions as erysipelas of the lids, conjunctivitis, keratitis, and iritis. In any of these conditions the lids will be found to be swollen, red and œdematous, even to the degree of being everted, and the upper lid may hang like a sac over the eye. Stinging pains are characteristic, the sharp shooting, needle-like sensations are apt to follow one another in rapid vibration-like succession. The condition is usually aggravated by heat and the symptoms are much accelerated at night.

Arsenicum has swelling and an œdematous condition of the eyes but without the characteristic pain of apis, the œdematous lids are firmly and spasmodically closed, and the edges are very red. There is an extreme redness of the inner surface of the eyelids and the lachrymation and discharge from the eye excoriate the lids and cheek. There is pain beneath the orbit which is sometimes excruciating. Pain in the eyelids especially on moving them as if they rubbed against the eyeball: much dryness is the characteristic sensation.

Aurum metallicum has a peculiar form of blindness, occasionally encountered, in which the upper half of the field is lost, the lower half being visible. There are sensations of dryness, stinging, drawing, and itching at the inner canthus. The eyes are apt to feel hot, bones around the eyes feel bruised and there is redness and swelling of the lids. Ulcerations of the cornea and interstitial keratitis due to scrofulous conditions or to hereditary syphilis have been relieved by this drug. Iritis and keratoiritis, especially if of syphilitic origin, respond rapidly to this drug, particularly after the use of mercury. It has been recommended in detachment of the retina with haziness from infiltration of vitreous.

Belladonna with its usual characteristics is often indicated in eye disturbances. Its great characteristics in inflammation of the eyes are dryness, congestion, blindness, and photophobia, accompanied by general arterial distension. The optic disc is greatly congested, retinal veins and arteries are enlarged, everything he looks at seems red, and there are flashes of light before the eyes and great photophobia. Double vision with flickering before the eyes and the eye is sensitive to air and light. Great hyperemia of the retina, headache, congestion of the head with photophobia. There are convulsive movements of the eyeball in the light with severe pressive pains extending over the whole head, ameliorated in a dark room. Orbital neuralgia, especially of the infra-orbital nerve, with red face and hot hands. Amaurosis and amblyopia, especially if congestive in form and accompanied by headache and other characteristic symptoms.

Bryonia with its headache in the morning and very sore eyes, which are worse on moving them. Sensitive, pressive pain coming and going in the left eye, especially violent on moving the ball, will give this remedy a place in many of your ophthalmic prescriptions. It is useful in iritis caused by cold, especially in rheumatic subjects, irido-cyclitis and irido-choroiditis from the same cause, choroiditis and glaucoma in which the pains are sharp and shooting in character passing through the eye into the head, or from the eye downward into the malar region and thence backward to the occiput; the seat of pain becomes as sore as a boil, and the least exertion, talking, moving, or using the eyes, aggravates the trouble.

The group of Potassium salts, Causticum, Kali bichromicum, Kali carbonicum, Kali iodatum, and Kali muriaticum are many times indicated in the deeper and more severe affections of the eye.

Causticum is indicated in inflammation of the eye with burning and pressure in the morning. Tickling of the lids with lachrymation even in a warm room, but worse in the open air; pupils are dilated. There is a sensation of heaviness in the upper lid and great inclination to close the eye. Vision is indistinct, as though a thick cloud before the eye and diplopia from paralysis of the muscles is worse on turning the eyes. This remedy has been said to check the development of cataract, but its greatest sphere is in paralysis of the muscles, where it is considered the remedy "par excellence." It has been used in paralysis following diphtheria.

Kali bichromicum is of great value and especially indicated in mild cases of croupous conjunctivitis (a condition midway between purulent and genuine croupous inflammation), in which the false membrane is loosely adherent, easily detached and has a tendency to roll up and separate into shreds, which come away in the discharges, giving them a stringy appearance. The discharges are profuse and the conjunctivæ are very much inflamed, even to a state of chemosis. The lids are swollen and the cornea may be hazy.

It is of especial importance, however, in chronic indolent forms of inflammation of the eye, particularly of ulcers and pustules on the conjunctiva or cornea, in which no active inflammatory process is present and therefore characterized by no photophobia and no redness or very little, not as much as might be expected from the nature of the disease. The pains and lachrymation are also usually absent. Corneal ulcers, which have a tendency to bore in without spreading laterally, indicate *Kali bichromicum*. The eye may be quite sensitive to touch and the secretions are of a stringy character.

Opacities of the cornea have been cleared under this remedy; sometimes used internally alone and again both externally and internally.

Clinically *Kali carbonicum* has been found useful in edema of the lids, especially if accompanied by sticking pains and heart indications.

It may be occasionally of service in small round ulcers of the cornea with no photophobia.

The verified symptoms indicate its usefulness in asthenopic troubles.

Kali iodatum has been used in edematous swelling of the eyelids. Inflammation of the conjunctiva with purulent secretion; chemosis.

MAXIMS FOR THE DOCTOR.—

A wise physician makes a glad father, and a good homœopath is a blessing to a whole community.

Better a little dose of the right remedy than great compounds and trouble therewith.

Come unto the allopath all ye that labor and are heavy laden and he will give you rest.

Do not the abominable things of the quack.

Except an allopath be born again he may not know a drug from a remedy.

Foolishness is bound up in the hearts of the people, but the rod of correction is held by the homœopath.

Grieve not a doubtful patient lest he depart from thee.

Homœopathy becomes the watchword of the wise.

It is good to draw near to Hahnemann's teachings.

Keep your pocketbook full with all diligence for out of it cometh all the issues of life.

Liars shall have their part in the lake which burns with fire and brimstone but sulphur high shall quench their thirst.

Many are the afflictions of the people, but the infinitesimal dose relieveth them all.

Now is the accepted time; now is the day of the homœopath.

Out of the abundance of nostrums does the quack flourish.

Pray on thy patients in secret, and thy patients which hear in secret shall reward thee openly.

Quit you like homœopaths, be strong, stand fast in the faith.

Remember homœopathy in the days of thy weakness.

Salvation belongeth to the homœopath.

Trust in the similimum at all times, ye people, pour out your gold into it.

Upon the faithful shall rain an abundance of good health.

With these admonitions I present to you, Dr. Barton, this loving cup as a token of the respect and good fellowship your colleagues bear you.

Young man, overcome with temptation to pass it from friend to friend; rather keep it to yourself, and fill it with the laurel of your vintage.

Zeal hath consumed me for time has forgotten to stand still.

With these words I conclude my remarks: Continue in the good way you have begun—

Have communion with few,

Be intimate with one,

Deal justly with all,

Speak evil of none.

—Dr. Amanda C. Bray, *New England Medical Gazette*.

COAL TAR PRODUCTS IN INFLUENZA.—Dr. B. W. Egan, of Carroll, Indiana, in a timely article on influenza says: The coal tar products have been largely employed for the relief of the pain in the back and limbs. Although they give ease they are harmful if the doses are large, and often fail if they are used in moderate amounts. They tend to increase nervous and circulatory depression, and to decrease the ability of the patient to resist the infection from which he is suffering and the possible secondary infections which may occur.—*The Clinique*, Jan., 1910.

During the first few years of grippe epidemic in the early 90's, it was notorious that the old school lost many cases in the ensuing stage of prostration by pneumonia and heart failure. This continued until they learned not to give the coal tars in the early stages.—Ed.

SODIUM BICARB. IN THE INVETERATE VOMITING OF PREGNANCY.—Dr. Geo. Burford, Senior Physician for Diseases of Women to the London Homœopathic Hospital, comes out in the *March Review* with some cures of inveterate vomiting of pregnancy by 'the use of large doses of bicarbonate of

soda. He says: "The malignant vomiting of pregnancy has been shown to be concurrent with the presence of acetone and diacetic acid in the urine and the ingestion of bicarb. of soda in limited, but sufficient dose will eliminate the acetone factor and banish the vomiting within a week."

Speaking of a typical case later on in his article, Dr. Burford quotes as follows, which I append to make clear his method of using the soda:

"She took as much as 640 gr. of bicarbonate of soda per diem for several consecutive days, after trials of 10 gr. 20 gr. and up to 100 gr. at a dose, with absolutely no effect.

"The dosage which gave immediate and steady relief was a coffee-spoonful of sodæ bicarb., which dose, carefully weighed, subsequently was found to average 160 gr. The method ultimately found of most value was this amount taken in half a tumbler of soda-water just before meals. This gave an immediate sensation of relief, at once allaying the heartburn, nausea, with disgusting taste as of rancid tallow, and allowing the patient to take a comfortable meal. This rancid tallow (oxybutyric acid) taste was, next to the incessant nausea, the most distressing feature of the case, and a few such doses of bicarbonate banished this odious symptom.

"After about one week the dose of bicarbonate was reduced in frequency to once or twice daily, as a preventive measure, and the pregnancy thus proceeded from about the fourth month to the eighth, with no further gastric distress. In previous pregnancies this had persisted almost without break. At the end of the eighth month the oxybutyric eructations and the sense of nausea returned; a few doses of bicarbonate given to the same extent as at first banished these recurrences entirely in two or three days.

SEDUM REPENS.—This plant has been highly praised by Dr. Stager in certain cancer cases, and there has been a little uncertainty as to which variety of *Sedum* is the plant to be recommended. Dr. Stager writes to the *Homoeopathische Monatsblätter* to say that it is an Alpine plant designated in the newest botanical publications (notably in the *Flora der Schweiz* of Dr. Schinz and Dr. Keller), *Sedum Alpestre Villosum*. Dr. Stager, having used the name *Sedum Repens*, proposes to keep to it, but adds the designation "Schleich," the name of the botanist who first described it. In the same issue of the journal, are notes of several cases of cancer treated with the remedy by Dr. Hallmann. The results are excellent; the drug seems to have a wonderful power over cancer pains from the beginning. It is certainly a remedy to be remembered.—*Hom. World*, January, 1910.

NATRUM MURIATICUM.—A Mr. Gumpel, writing in *Chamber's Journal*, has noticed some interesting facts concerning the medicinal powers of common salt in tropical countries. He takes a little salt regularly in a glass of water before breakfast, and by this means cured himself of morning headaches and of constipation, both complaints that come very markedly within the sphere of action of *Natrum Muriaticum*. For constipation indeed, Mr. Gumpel regards it as a sovereign remedy, and as he holds that constipation predisposes both to cholera and malaria, he believes the drug a prophylactic to both. It has claims to consideration in both diseases

from the standpoint of homœopathy. Certain Russian physicians use it regularly in cholera. Mr. Gumpel's dosage is interesting, and Dr. Schulz has shown that *Natrum Muraticum* will correspond to its indications in a small but material dose.—*Home World*, January, 1910.

GRAPHITES IN ERYSIPELAS.—Dr. Walter Sands Mills contributes a short paper on "Graphites," and cites some cases of erysipelas in which this medicine appeared to effect a cure. So marked was the effect that Dr. Mills states that unless the indications for some other remedy are overwhelming, he now always uses graphites in the above malady, although in what doses he does not state.—*North American Journal of Homœopathy*, December, 1909, p. 837.

In this connection my attention has been drawn to a very practical suggestion made by Dr. Margaret Tyler, in January *Homœopathic News*. She cites a clinical case in which Graphites had been given and had broken up some old rheumatic adhesions. She continues:

But why *Graphites*? What were the indications? Sad to confess, the "indications" were only hints; but they came from Nash and Kent! Nash says of *Graphites*, "*old hard cicatrices soften up and go away under its action*, especially those left by abscesses of the mammae." And Kent amplifies this in his lecture on *Graphites*, and shows its relation to *cicatrices of a low grade that contract and indurate*: which one may translate "inflammatory" or "scar-tissue." I had already caught at the hint in a case of pericardial adhesions, which have disappeared under this remedy; and so tried it in this case, with the result that adhesions of four years standing—which had resisted remedies and operative means, have practically disappeared with *five doses of Graphites, C. M.*, in three or four months time. The girl can pronate and supinate freely; lift her arm, and put it behind her back.

This case is published by way of suggestion. In old incurable nerve cases, are we not told that the element of inflammatory tissue may come in, strangling nerve tissue and preventing its nutrition and recovery? Might not a few doses of *Graphites* here mean new hope—as an intercurrent? One person, anyway, is going to try.

In this connection why might not *Graphites* be useful in softening the peritoneal bands that often anchor the uterus in abnormal positions?—Ed.

There remains only to be noted the advantage with which coffee may be administered in the "teasing" and ineffective pain of early labor. The condition is one in which intolerance of pain is often sufficiently marked to suggest a homœopathic basis for the prescription. A cup of strong coffee (with milk to counteract the tannin) will relieve the pain, hearten the patient, reinforce the muscles, and hasten those effective pains which will bring the labor to a speedy end.—Dr. Wilkinson, on "Coffee," *British Hom. Review* for March.

"But Mr. Armbrecht tells me that 'Sepi. is a marvellous medicine for goitre,' as he has experienced with many Swiss girls with goitre that he has had in his employ; 'but,' he adds, 'they all had *Sepia* symptoms!'"—Dr. Weis, *Hom. News*, January, 1910.

ACONITE.—Leading Indications: In a form easily to be remembered, Dr. E. B. Nash discusses the leading indications for aconite by comparison with other remedies. He places the former under seven heads: (1) Fear (especially of death), fright, and their effects; (2) anguish and restlessness, with agonising tossing about; (3) pain; tearing, cutting, driving to desperation; (4) numbness with tingling; left side, tongue, lips, spine, etc.; (5) location of symptoms: chiefly heart and respiratory organs; (6) chill, fever and sweat, chiefly synochal fever; (7) modalities; causes: exposure to dry cold air or checked perspiration, fright, operations; *aggravation*, symptoms increased in evening and night, from warmth, covering, and rising; *amelioration*, symptoms diminished in open air, from assurance and encouragement.—*Homoeopathic Recorder*.

ANTIMONIUM CRUDUM.—Is a grand remedy for rheumatism in the feet when the soles are so sensitive that patient can hardly step on them.—Dr. Boericke, *Century*.

SILICA 30 is recommended of great service in advanced phthisis, in relieving many distressing symptoms to which it is homœopathic. Here it corresponds to *Stannum iodatum*, which also is of frequent application in the more advanced forms of phthisis, while *Arsenicum iodatum* corresponds more to the earlier stages.—*Century*.

SOME EXPERIENCE WITH COLCHICUM.—By A. L. Fisher, M. A. *Bloating*. About the first that I remember of Colchicum dates back to 1869 or 1870, when Dr. Hering lectured on this remedy in the Hahnemann Medical College in Philadelphia.

In the course of that lecture he stated that if cattle after eating clover in the spring time got enormously bloated, there was no need to stick a knife into the paunch to let out the gas, as a few doses of Colchicum would always give relief.

In my child-like simplicity I believed what he told us, and sent a two dram vial of Colchicum 3x dilution to a farmer brother, with instructions to put two drops of it into a two dram vial nearly full of water, shake well and empty it into the beast's mouth. It is now nearly forty years since the remedy was sent, and the sharp, double-edged knife formerly used to let the gas escape has not been resorted to since then, but the Colchicum has been used successfully in scores of such cases in that neighborhood. And, by the way, that vial of the third dilution is not empty yet, having been refilled with alcohol whenever contents were getting low, many times.

Strangulated Hernia.—The next case in which this medicine was used with exceedingly gratifying results on my prescription was many years later, when I received a telegram calling me in haste to see this same farmer brother, fifty miles away. Arriving at his bedside at midnight, I found him in truly a sorry condition. An old inguinal hernia had become strangulated, and all efforts of his attending physician to reduce it had failed. Abdomen enormously distended, constant hiccoughing for twenty-four hours, stomach and abdomen extremely sensitive to palpation; there was a profuse flow of saliva or mucous, and his facial expression, as would be

expected under such circumstances, was indicative of great suffering and a serious condition. His medical attendant had left him a few hours before I arrived, and had said that his patient would never see another sunrise.

As I gave him the first dose, I said: "Take a few doses of *Colchicum*, old boy, and get well."

Between hiccoughs he managed to say: "I haven't been eating clover, Doc." Hiccoughs ceased in twenty minutes; within an hour and a half his bowels moved freely several times; the bloating went down rapidly, and he reduced his hernia himself easily. The movement of bowels later became involuntary, though not without his knowledge, and a dose of *Hyoscyamus* was given. By sunrise he was fully convalescent, and the prognosis of his former physician falsified.

ARSENICUM IN FACIAL NEURALGIA.—Dr. J. B. G. Custis writes: "*Arsenicum* is the right-sided remedy as regards the face. The pains must be hot; the patient must be pale and restless; he is generally thirsty, and always prostrated. Without these characteristic symptoms the remedy will disappoint you, but in some of its combinations it will bring about the results which you had expected from the metal alone. The combination which has served me more than any other is *Natrum Arsenicum*. Most of the patients present a dejected picture, because of the wasting of the face in the orbital region. They complain of headache, infraorbital for the most part, and have discharge from the nostrils. The pain is referred to the malar bone and comes in paroxysms; in fact, it is one of the remedies for the right-sided tic douloureux.

REMEDIES FOR COUGHS.—*Belladonna*. A dry cough, spasmodic cough, with dryness, rawness and scraping in the larynx. Every now and then you get attacks of suffocation with the paroxysm of cough. The only time you find anything like moisture with the belladonna cough is when a person suffering from chronic catarrh contracts a cold. Then the mucus is seen and left in shreds.

Spongia.—A dry suffocating cough with soreness and burning in the chest. The patient is very hoarse. There is a sense of constriction of the larynx which makes the respiration difficult. The difficult respiration often accompanies the dry metallic cough, and there is a feeling as if the breath passed through some porous substance. The dry cough and constriction are both relieved by eating and drinking.

Rumex.—An incessant, dry, spasmodic cough, worse by breathing cold air, by lying down, at night. The irritation causing the cough is from mucus which produces a tickling behind the sternum. The time of day is from 10 to 12 p. m. There is relief from covering the head and breathing under the bed clothes.

Sticta.—A nervous, dry, incessant, hacking cough, sometimes in spasms like whooping cough. Usually a remedy for nervous, reflex cough and whooping cough, but occasionally the incessant irritating cough of measles. Although nothing seems to ameliorate the cough of *sticta*, it is decidedly worse towards evening, or when the patient is tired.

Causticum.—A hollow, dry, hoarse cough with soreness and rawness

down from the trachea. The causticum cough is the opposite of rumex in that it is worse when covered up warm in bed. It is relieved by sips of cold water. The feeling as if there were mucus in the larynx which the patient cannot get under and raise is very marked in causticum. With the cough the patient involuntarily voids urine.

Bryonia.—A dry, hacking cough from irritation in the upper part of the trachea. Every time the patient coughs there is a feeling as if the head and chest would burst. The Bryonia cough is sometimes called a "stomach cough," because it is aggravated by eating and drinking. With the cough there is a sharp sticking pain beneath the sternum, in fact, all through the chest. After a few hours the cough may become just a little moist and you have a slight amount of mucus streaked with blood, expectorated. The marked aggravation of this cough is from coming from a cold into a warm room.

Phosphorus.—A dry, rough, hoarse cough, with tightness or oppression of the chest and spurring of urine during the cough. Phosphorus has two marked aggravations, 1st, talking, laughing and singing, 2nd, going from warm into cold air. There is a good deal of burning in the larynx, also beneath the sternum. Notwithstanding the dryness of the cough and burning you may have mucus, frothy, blood, purulent mucus expectoration. With the cough of bronchitis and pneumonia the phosphorus patient cannot lie on the left side without attacks of suffocation.

Ipecacuanha.—A constant, rough, shaking, ineffectual cough. Ineffectual in the sense that mucus of which there is a large amount in the bronchial tree cannot be dislodged by coughing. The cough causes much nausea, "gagging," and sometimes vomiting. With the different conditions in which you find ipecacuanha cough you have a wheezing, whistling in the chest.

Hepar Sulph.—Hepar seems to have a dual cough as well as a dual action for suppuration. It is useful for a dry and for a moist cough. The dry cough is usually worse in the evening, the moist loose cough in the morning. The keynote to either variety is "cold" and "cold air." If a draft of air strikes the patient or if any part of the body becomes cold the mucus of the loose cough seems to tighten and the paroxysm of the cough becomes more violent and prolonged. "Cold" and "cold air" also aggravate the dry cough. The hepar patient always sweats when coughing.

Tartar emetic.—Coughing and gasping in alternation, a loose cough with little expectoration, much rattling of mucus in trachea. The cough compels the patient to sit up in order to breathe. The face is pale, cool, and moist. The pulse is rapid, weak and trembling. Great rattling of mucus in the chest is the keynote to the remedy.

With the belladonna, spongia, sticta, and causticum, I habitually use cold water compresses as follows: Dip a piece of linen in water at a temperature of 60 or 65 and wrap around the neck. Over this put a flannel cloth to protect the clothing. Change as often as it becomes dry.—*Iowa Medical Journal*.

FOREIGN LITERATURE

CONDUCTED BY E. FORNIAS, M. D.

ANOTHER INCURSION IN THE DOMAIN OF SIMILIA.—This time the invader hails from Italy and the violated drug is introduced under the deceptive name of *Droserin*, just as one of our allopathic brethren in Philadelphia introduced some time ago our *Crotalus*, under the name of *Crotalin*; another daring infringement on our rights. Nothing would, of course, be said about this new foray if the eminent Dr. Lorenzo Chieffi, of the Naples Hospitals, had contented himself with bringing to light again the employment of *Drosera Rotundifolia* as a rubefacient, or to destroy warts and corns, for this step would have been a revival of an allopathic practice of olden times, but to come out boldly proclaiming the wonderful virtues of *Droserin in whooping cough* is more than we can allow to pass without protest. The only relieving feature of the usurper is that he claims his remedy to be nothing but a peptonized ferment of some of the *Droseraceae*, but the clinical history of *Drosera* is too well known to us to be impressed by the deception. Dr. Chieffi can find the cause of his success with *Drosera* in the treatment of so many cases of whooping cough, after having tried other drugs without avail, if he only makes an honest descent into the *Materia Medica Pura of Hahnemann*, and reads, if possible, *Hahnemann's Fragmenta de Viribus*.—From the *Hom. Monatsblætter*, April, 1910.

DISORDERS OF CONSCIOUSNESS AND PERSONALITY.—The disorders of consciousness and personality play an important part in the *psychoses*, as well as in the *neuroses*. Therefore we shall point out here these disorders after endeavoring to explain, as briefly as possible, of what they consist.

Psychology not having yet arrived at a precise definition both of consciousness and personality, it is, on this account difficult to describe exactly the morbid changes they may be able to undergo.

Consciousness and Personality.—The best idea we can have of consciousness is to consider it with Ribot and his school, as a phenomenon of organic origin, in the constitution of which enter, as chief elements: *exact perception, personal appropriation, and the mnemonic classification* of our sensations. A sensation endowed with these attributes is a *conscious sensation*; a sensation which is not normally perceived, reported to the Ego, or placed in its rank in the chain of *souvenirs*, is not a conscious perception. A conscious sensation represents the most simple expression of a state of consciousness, a state of rudimentary consciousness, which becomes linked to other similar states to form aggregates, or *syntheses of consciousness*. Finally the *total consciousness* is the synthesis of these syntheses, in other words the totality of all states of consciousness existing at the same time in the individual. This total consciousness then

necessarily varies with the subject and, in the same subject, according to age and moment.

The *personality* should not be confounded, as it is frequently done, with the *consciousness*. In fact, the personality is more than the total of states of consciousness; it also comprises states of unconsciousness and sub-consciousness. Although at the end of all this one arrives at the conclusion that the personality is the individual self, in its totality, in its continuity, in its psycho-organic unity, while consciousness is simply the part brought to light and ever changing of this individuality.

"If I could," said I. Maxwell, "make a plain comparison between the phenomena of psychic life and the facts of our common experience, I would compare the unconscious to a large hall containing innumerable objects. The hall is dark, and to perceive what it contains we only count with a dark lantern, provided with a lens through which the rays of light project in a conical pencil, which diminishes its illuminating area as it extends upon larger surfaces. Now, to recognize an object we must approach the lamp in order to throw a more concentrated and powerful light, but we can not see the objects outside of the luminous ring of the lamp. The objects upon which it throws its light are our *souvenirs*. The more powerful our lamp, the more vast is the field it lights up, and the more we can see at one time the objects in the hall. In the same manner, the more our active consciousness is developed, the more it will embrace souvenirs in the immense reserve of the unconscious."

"But, like the lamps, the consciousness has not the same power; the lamps themselves can be provided with diverse focuses, and we conceive well that a lens of a few millimetres of focal distance only gives us a very narrow field. In psychical life, if the active consciousness is like the lamp, the attention is like the lens. If the attention has only a very limited field, it will only embrace a very small number of psychical facts."

Consciousness being a very important part of the personality, which we may call the *conscious personality*, we have as a result that all the alterations of the consciousness affect more or less the personality. Physiologically, we know, that the total consciousness may vary in form and extent without any pathological lesion. *Personality*, on the other hand, cannot remain normal unless it maintains itself one and identical through all its evolutive modifications, and all that which alters its unity becomes for it an agent of disintegration.

"It is the organism and the brain," says Ribot, in a sentence which resumes admirably these psychological ideas; "it is the organism and the brain, its supreme representation, which is the real personality, containing in itself the rests of all that we have been and the possibilities of what we may become. The whole individual character is inscribed there with its active and passive aptitudes, with its sympathies and antipathies, with its genius, its talent or its follies, its virtues and its vices, its torpor and activity. What emerges up to consciousness is little, compared with what remains buried and shrouded, though active. The conscious personality never has but a small part of the *physic personality*."

"The Unity of the *Ego* is not that of the entity, one of the spiritualists which spreads in multiple phenomena, but the co-ordination of a certain number of states springing up again incessantly, have, as the only point of

support, the vague sentiment of our body. This unity does not go from above downwards: it is not an initial point, but a terminal one.

"The unity of the *Ego*, in a psychological sense, is then the cohesion, during a given time, of a certain number of states of clear consciousness, accompanied by others less clear, and by a multitude of physiological states, which without being attended by consciousness, as their congeners, act as much, and even more than them. Unity means co-ordination. The last we can say of all this is, that being the consensus of consciousness subordinate to the consensus of the organism, the problem of the unity of self is, under its ultimate form, a biological problem. Let biology, if it can, explain the geneses of the organisms and the solidarity of their parts. The physiological interpretation will then follow.

Disorders of consciousness.—The disorders of consciousness have necessarily as a point of departure an alteration of their constitute elements. It is this information which will serve us as a base to class them.

(a) *The disorders of consciousness by alteration of perceptions* are those which reach it at its very source. They are very frequent and differ, according as the alteration rests upon *perceptions of external origin, sensorial*, or upon *perceptions of internal origin, cenesthetic*. The first occur in all *deliria of a hallucinatory or illusory character, neuropathic or psychopathic*; the second in *neuroses and psychoses of a hypochondriac or anxious form*.

(b) *The disorders of consciousness by alteration of sentiment of personal appropriation* are those in which the incorporation of the sensations of self is no longer made in a normal way. They vary from a simple lessening of this incorporation and its disappearance, to the attribution of perceptions experienced as another self. These troubles, which constitute the usual foundation of diseases of the personality, because they tend to destroy its indispensable unity, are found in such *neuroses* as neurasthenia, hysteria, epilepsy, as well as in the *psychoses*, and particularly in *metabolic deliria*.

(c) *The disorders of consciousness by alteration in the mnemonic chain of sensations* are those due to a disturbance either of the *fixation* of sensations, or of their *chronological localization*. The first are observed in those pathological conditions where the *anterograde amnesia*, actual or of fixation, predominates. (Secondary states, toxic and traumatic psychoses, phenomena of the "*never seen*"); the second in the *paramnesic states*, and principally in the phenomena of the "*already seen*."

Let it be understood, however, that there are also *disorders of consciousness* due to the conjoint, total perturbation of these diverse elements. This, for instance, we notice in states of *mental confusion* and *dementia præcox*, where the perception, personalization and fixation of sensations are simultaneously involved by the pathological process and also, in a more marked degree, in the crepuscular phases of *epilepsy*.

It is commonly said, and this is one of the most current expressions in psychiatry, that *insanity is unconscious* and that its great psychic syndromes: delirium, hallucination, and impulsion, are unconscious. By this is understood, not that the subject has ceased to perceive, to appropriate or connect his ideas or his sensations, but simply that he ignores their pathological nature. This is, indeed, an important factor, for it serves us

to distinguish psychoses with complete loss of reason and responsibility from those which still retain a more or less amount of these attributes, and which for this motive are called conscious, for instance, *conscious delirium*, *conscious hallucinations*, *conscious impulsions*, &c.

This particular trouble of consciousness, may in the main, be connected to an alteration of the exact perception of ideas and sensations, for if the insane has preserved the coarse perception of the psychical elements of his troubles, he has no longer the differentiated perception of their origin and of their real value.—*Regis' Psychiatry*, 1906.

(To continue with Diseases of Personality.)

PRESENILE GANGRENE DUE TO ARTERITIS OBLITERANS.—Schumann reports two of the rather rare cases of obliterating arteritis with consecutive gangrene, both patients exhibiting a progressive gangrene of the toes from the gradual occlusion of the blood vessels, an occlusion indicated clinically in the most characteristic manner by the behavior of the pulse. Both patients were entering upon their 40th year, and were so addicted to the abuse of tobacco that some connection betwixt the morbid condition and nicotine should not be lost sight of. In both cases intense pains, lasting for months and years, had preceded the necrosing process. In the history of one patient, all of the symptoms of Erb's dysphasia were found, and, in this case the arteries showed marked histologic change. Etiologically, according to Erb, a chronic nicotin intoxication is, by far, of the greatest import; alcohol and syphilis are much less frequent. The anatomic process in most instances is extremely characteristic, though a sharply defined limit as regards arteriosclerotic gangrene and diabetic gangrene cannot be drawn, for, in otherwise typical arteritis obliterans, we may have transition symptoms, i. e., foci of calcification and of fatty degeneration.

Therapeutically, as Erb frequently remarks, physical therapy is able to perform wonders in the beginning, but if gangrene shows up, surgery is called for.—*Muench med. Woch.*, 1909, No. 39.

CONCERNING THE PATHOGENY OF ECLAMPSIA AND ITS THERAPY.—In the *Mediz. Klinik*, 1909, No. 42, Dr. P. Baumm, after communicating some personal observations and reviewing the numerous intoxication theories relative to etiology, says. The condition most probably develops because of a poison cast out from the placenta, and, for some unknown reason, entering into the maternal blood stream. This toxin causes the development of thrombi and is thereby injurious and, perhaps, acts directly upon the maternal organs as a specific organ-toxin, thus evolving the well-known syndrome. It may almost absolutely, be postulated that it is also neurotoxic, acting chiefly upon the cerebral mechanism. There is no doubt, also, of the existence of vaso-motor disturbances, which, according to Zagemeister and Buttner, are revealed as a spasm of the vaso-constrictors, which, among other effects, leads to an insufficient hemorrhage of the kidneys. The functional changes in the kidneys, the sudden development and disappearance of oliguria and anuria, as well as albuminuria, after the attack, are thus explained. Therapeutically, the following view-

points seem rational: (1) Every eclamptic is to be confined immediately after the first attack. Unfortunately, many patients come so late, that an early delivery is to be thought of no longer. Statistics demonstrate the good effect of early arrest of pregnancy. (2) The elimination of poisons accumulated in the system must be hastened. Even after confinement there is still danger, demonstrated by post partum attacks. Renal function is to be stimulated by diuretic measures, particularly by those which develop diuresis by increasing the blood pressure—(caffeine, digitalis, etc.). If this be insufficient, diaphoresis is in order, possibly in conjunction with saline infusion per os, per anum, or, subcutaneously. Pilocarpine is not commended. Since the renal lesion is but a partial factor in the condition, it seems that its treatment of decapsulation of the kidney is not treatment (or removal) of the cause. Decapsulation, then, is indicated only when diuresis has become dangerously low, and not respondent to simple measures. The remainder of the morbid syndrome, however grave it might be, is not to be taken into consideration as a factor in therapeutic indications. And, it goes without saying, that the removal of the cause of intoxication, i. e., the interruption of pregnancy, takes precedence. Venesection is futile. (3) Efforts to render the toxin harmless by an antibody have not yet been successful. The animal experiments of Englemann and Stadel, endeavoring to diminish the coagulability of the blood by injecting hirudin (in 1 to 2% solution, subcutaneously) are worthy of study. Since hirudin is perfectly harmless, it may be similarly used with eclamptics, developing first, however, a suitable dosage by means of previous experimentation in order not to lessen overmuch the coagulability of the blood lest unpleasant sequelæ develop in the form of secondary hemorrhages. Dienst recommends for the same purpose an abundant use of alkalis, e. g., in the form of bicarbonate of sodium. This is worth trial, likewise oxygen inhalations (Zweifel). (4) The spasms are to be repressed, but not by chloroform or morphine, but by chloral hydrate, which, given per rectum, is harmless even in large dose. It is, however, dubious whether actual success in notably influencing the attacks is gained thereby. Lumbar anesthesia is not dependable. (5) Finally, careful attention must be given the respiratory and cardiac functions for which caffeine and camphor are of service when indicated, also artificial respiration for hours, with cold, wet sheet packs interim. Prophylaxis should not be delayed, and the urine, with regard to quantity (24 hrs.), albumin, etc., is to be regularly examined. If edema and albumin develop, then rest in bed, milk diet, alkaline beverages, diuretics and diaphoretics are recommended. If the renal lesion continues, the pregnancy is to be terminated, otherwise the danger of eclampsia increases daily in incredible proportion.

PICRIC ACID.—Is indicated in chlorotic states, with loss of vitality and general deterioration of the blood. Patient is cold and weary, physically and mentally. Use the 6x, 3 times daily.—Dr. Boericke, *Century*.

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SOME SUGGESTIONS TO THE GENERAL PRACTITIONER CONCERNING THE SUBJECT OF RHINOLOGY.

BY

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PAPER III.—THE EXAMINATION AND DIAGNOSIS OF RHINO-
LOGICAL CASES.

FIRST of all I wish to thank the Delaware County Society for the courtesy of this second invitation, following so soon after the first, to come and present them with a paper. The paper that I shall read is practically the third of a series of four upon the same general subject, all of which will appear in consecutive order in the HAHNEMANNIAN MONTHLY. My object in writing these papers is to stimulate the general men to take a greater interest in this much neglected subject, by giving them some practical hints on the anatomy and pathology of the nasal cavities and in this paper particularly to offer some suggestions about the examination of cases and to point out some of the more common conditions which a general man might recognize by a simple rhinoscopic examination (anterior).

The writer, having once been a general practitioner, fully appreciates how a man with a large general practice is so cramped for time during his busy season, that he is forced often to base a prescription upon a few symptoms alone and then hurry to the next call; otherwise, he would not be able to get around to see everyone on the list. However, there are less

busy times when he should give his patients more attention, at least to the extent of making an examination. Besides, an examination is called for in every obstinate case.

I find the average man in general practice is fair at making chest, abdominal and pelvic examinations, but quite backward in making nose and throat examinations. This is so because of a number of circumstances; (1) the necessary instruments for the examination of these cases are not convenient to carry, (2) but few houses are fitted with satisfactory lights, (3) when the light is satisfactory in quality it is often unfavorably located in the sick room, furthermore (4) a rhinoscopic examination consumes extra time for which many patients are not willing to pay. The result is, the examinations are not made sufficiently often to keep the family physician in good practice with the work. These objections, however, should not hold true with office work, besides, there is a sufficient number of patients who really need an examination to keep one quite busy during the dull season.

To encourage the general men to make the examinations and to point out the way for them is another way of stating the object of this particular paper.

An examination of the nose is not so difficult as seems at first thought, for the number of diseased conditions to which the nose is subject are relatively few as compared to those of the other organs. Besides, it is one part of the organism where we can actually see and palpate (with a probe) the greater part of the diseased areas.

I would suggest to the beginner to familiarize himself with the gross anatomy of the parts and this may be accomplished coincidentally with the inspection of cases. If you desire to gain experience rapidly, it is well to examine every nose upon the slightest suggestion from the patient or inspiration from yourself. It is pleasing to the patient to know that you are interested to the extent of making an examination and helps you proportionately to retain that patient. By keeping at the work of examining cases you cannot help but learn something about the subject; besides, you will be surprised to note the number of conditions that you will see, many of which will be enigmas at first, but as the work advances you will gradually recognize them as distinct and important pathologic conditions, the number and character of which will be far in excess of your anticipations. The results will amply repay anyone for his efforts.

EXAMINATION.

In outlining a method of examination it comes natural to give the method, step by step, adopted by the writer in his own private practice. I am at a loss to tell the fellow who is in a rush, which of the steps to skip for each step has its own particular bearing on the whole question; I must include, therefore, every step and leave it to the individual to do his own choosing. From my personal viewpoint one cannot be too thorough. I am impressed constantly with the importance of thoroughness. It is not at all uncommon for a man of only moderate skill, but thorough in his examinations, to pick up the mistakes of others, more skilled, who, on account of a temporary rush have been less thorough in their examination. In other words, moderate knowledge combined with careful work outclasses greater knowledge combined with less careful work. Besides, every careful examination adds something to one's store of knowledge.

Before any objective examination is begun it is well to get a full history from the patient. The extent and character of the history will differ in the different character of conditions and will vary somewhat with different individuals suffering from the same character of conditions.

The history in some instances may be sufficiently clear to lead one to an exact diagnosis, but should never be depended upon entirely. For instance, a patient with the history of long-standing nasal obstruction on one side, suggests strongly a deviation or spur of the septum to that side; however, we must decide the facts by our subsequent examination. It was only a few days ago that a case was referred to me for operation with the diagnosis based upon the symptoms alone of septum deviation. The examination revealed a gumma of the right side at the angle between the floor of the nose and the septum.

Obstruction to breathing through the nose, aggravated when lying down, with open mouth and projecting upper jaw, in a child naturally suggests adenoids. Although the history may suggest the diagnosis, it never decides it. The diagnosis is decided more by the physical findings.

The history is really of value more as a guide to treatment than to diagnosis. For instance, a patient with a marked septum deviation may give the history of unimpaired nasal

breathing while another with a less marked deviation may complain greatly. The history in the first case does not call for an operation while that of the second case does.

Take another illustration: two children with adenoids; the first may have a very large centrally placed adenoid which interferes considerably with nasal respiration. The second child may have a small laterally placed adenoid which interferes less with nasal respiration; but the history tells of repeated attacks of earache. The first patient's history prompts us to operate to relieve the obstruction to nasal respiration, while the second patient's history with quite normal nasal respiration would not suggest to the average practitioner an operation. From the standpoint of prognosis to hearing, however, the operation in the second case may be even more indicated than in the first, for it is just these cases which eventually develop either chronic middle ear catarrh or else in the event of an acute infection, an acute middle ear suppuration with possible complications.

In taking the history it is best always to let the patient tell his own history as nearly as possible in chronological order, holding the patient down, so to speak, from going into details which do not bear upon the subject under consideration. To aid one in doing this, it is well to bring out, without direct questioning, if possible, the following factors:

- (1) What are the patient's habits?
- (2) When and how did the present trouble begin?
- (3) Had the patient any previous trouble with the nose or throat, and if so, of what character was it?
- (4) Of what does the patient complain at present?
 - (a) Stoppage in the nose.
 - (b) Discharge, and its character, if present.
 - (c) Headache { When is it worse, and
When is it better?
 - (d) Fever.
 - (e) General conditions of health; has the patient retained normal weight or is he losing, etc.
- (5) Has the patient been treated professionally and what was the nature of the treatment?
- (6) For what does he come? This final question is aimed at bringing out the cardinal symptom or symptoms for which the patient seeks relief. The answer to this question should guide us, in a measure, as to the treatment.

Allowing space on the record sheet for any overlooked history which may possibly develop later, we are ready now to begin with the rhinoscopic examination (anterior rhinoscopic examination).

RHINOSCOPIC EXAMINATION.*

All that is necessary for this form of examination is a head mirror, suitable nasal speculum, small malleable probe about seven inches long with blunt end, an applicator (I use a malleable wire, from eight to ten inches long, with coarse screw thread on the end of it), sterile cotton and cocaine solution (from 5 to 20 per cent. solution): The stronger solutions require smaller amounts and work quicker than the weaker solutions.

Sterilize all instruments before using them and with freshly washed hands begin the examination.

The patient should be seated in a chair with the light behind and somewhat to one side of him so that his face is in the shadow. The choice of the side to which the light is to be placed is optional. Some advise one side, others the opposite side; whichever side is chosen, it is well to have the head mirror in front of the eye nearest the light.

Introduce the speculum into the anterior nares anyway that suits you so long as you do not touch the septum with it for this is uncomfortable, if not painful to the patient, and may cause the nose to bleed, especially in those so inclined. Most men introduce the blades one above the other. The speculum should be held in the left hand, if you are righthanded, for the examination of both sides, and vice versa if you are lefthanded. Throw the light into the cavity so that it may be focussed on the part you wish to see most clearly. The patient may be directed to change the position of the head by speaking to him, or better, by directing it with your right hand placed on the

*I have limited myself to a description of anterior Rhinoscopy for the reasons:

(1) That a careful anterior examination, since the adoption of cocaine as a diagnostic aid, has made the posterior Rhinoscopic examination quite superfluous in a great majority of the cases, including adenoids.

(2) Posterior Rhinoscopy is difficult and unsatisfactory in children and an attempt to make it often results in the child refusing even an anterior examination.

top of his head. Look carefully at everything that can be seen in the nose.

Often on account of marked swelling one sees but very little, sometimes only the anterior end of the inferior turbinate and but a small portion of the septum. If these two parts are all that can be seen because of swelling, the case may be one of (1) severe acute inflammation (rhinitis), (2) acute vaso motor turgescence (typical of which is hay fever) or (3) hypertrophies. If the parts in addition are red, it suggests an acute cold; if pale, hay fever or hypertrophies (either the so-called false or the true hypertrophies).

An experienced examiner can tell often without proceeding further what the condition is, but I would not advise even the expert stopping here, for not sufficient extent of the nose has been seen to determine accurately the entire condition. In a case like this the next step is to examine further and carefully under the effects of cocaine. The cocaine acts to anaesthetize the parts, and too, to shrink the tissues by driving out the blood. The cocaine may be applied with a small cotton swab wrapped on the end of the applicator. Caution—do not use too large a swab nor too much solution. Cocaine produces no bad effects upon either the healthy or diseased mucous membrane, but its systemic effects will bear watching, especially in children. To avoid these systemic effects as much as possible, instruct the patient to tilt the head slightly forward after each application, so that the solution may not flow backward into the throat. Remember, too, that a full meal in the stomach is a good thing to prevent systemic effects, for all toxic substances work more powerfully in the case of an empty stomach. Accordingly where cocaine is to be used I operate my patients after a full meal. The cocaine needs to be applied at intervals of a few minutes, two or three times before the nasal mucous membrane has become fairly anaesthetized. If the cocaine causes the mucous membrane to shrink to a very thin layer covering the bone, the swelling must have been due principally to the presence of an increased amount of blood in the tissue.

A smooth, red, reducible swelling speaks for a cold in the head, a less reducible and less smooth swelling and one paler in color speaks for a longer standing process; the more so when combined with a slight increase in the amount of permanent tissue. The case may be one of hayfever or slight diffuse

hyperplasia.* If the tissue was originally pale in color and uneven on the surface permanent thickening of the mucous membrane of long standing—a true hyperplasia. After cocaine-ization of the nasal cavity the mucous membrane will have shrunk sufficiently, except in rare cases of very pronounced hyperplasia associated possibly with polyps, to permit of a more thorough inspection of the greater portion of the nasal cavity. The thickness of the mucous membrane can be told best by the use of the probe. Touch the part which you wish to examine and press it gently against the underlying bone and one can estimate its thickness.

Permit me to cite a few more cases, showing the method of analysis for the determination of a diagnosis.

A second case comes with the symptoms of cold in the head. First inspection (before using cocaine) shows the mucous membrane of both sides to be quite red, perhaps dry and swollen, but not so marked as to prevent one from seeing at least a small space between the inferior turbinate and the septum through which can be seen a narrow portion of the anterior and inferior part of the middle turbinate which is likewise red, dry and swollen. The diagnosis of early acute rhinitis is strongly suggested. A closer inspection may show tiny white or yellowish glistening beads scattered on the surface. With the cotton applicator these beads may be brushed away. Their presence is due to an abnormal inflammatory secretion oozing from the orifices of the mucous glands and are present during the more ripe stage of an acute rhinitis. If after cocaine has been used, the mucous membrane has shrunk considerably but still remains somewhat more red than is found in normal cases, the case is positively one of acute rhinitis. If, on the other hand, the mucous membrane shrinks unevenly so that irregular pale swellings remain along the free margin of the inferior turbinate and about the anterior end of the middle turbinate, on both sides, the case is one of acute rhinitis complicating an old chronic catarrhal rhinitis with hyperplasia.

A third case is presented with the history of chronic catarrh (verbally stated by the patient) with stoppage of the nose, plenty of secretion—worse during the winter months and in damp weather—attacks of sneezing and sense of dullness or

*The terms hyperplasia and hypertrophy are used interchangeably; however, hyperplasia is the better term since it tells more accurately the nature of the pathologic process.

fullness in the head. Upon inspection one sees soft pale masses galore, quite movable with the probe, which the patient permits you to use with apparently less discomfort to him than to the average patient. The masses are pale (bluish pale) in color while very little or no breathing space can be seen. The case is one of polyps (oedematous hypertrophies). After cocaine has been used liberally over a considerable period (at least for ten minutes) a sufficient amount of shrinkage may have occurred to permit you to ascertain with the probe, the part from which they spring (move often between the middle turbinate and the lateral wall of the nose). The posterior polyps are less distinctly seen and rarely if ever protrude anteriorly.

A fourth case comes, complaining of more or less stoppage in the nose, which may not be constant however, worse when lying down. One side may be stopped more at one time than another; worse when he has a cold, which, if he be an outdoor man, does not happen frequently. The condition may be one of several. If by inspection (providing the patient has not had a recent cold) the mucous membrane appears to be nearly normal, however with the breathing space narrowed on one side, the diagnosis of septum deviation is suggested and this calls for a thorough examination of both sides of the whole septum under cocaine to determine accurately where the deviation is most pronounced and if it is associated with a spur and its location. In brief, the only art of discerning a deviation lies in a thorough inspection. Stay with your case until you know every elevation and depression and don't forget to examine the upper area, for the high deviations are they which are responsible for many distressing headaches. As an aid in determining this factor take a case with a dull headache or sharp neuralgia and use cocaine to the nose until you have shrunk all of the soft parts, when if the case is due to intra-nasal conditions the patient gets relief of symptoms. Cases of headaches relieved by the use of camphor menthol application or other volatile substance which open up the breathing spaces, come generally under this class. Don't forget that the tagging of a case as one of septum deviation, merely because it appeals to you as the most striking condition in the nose, is not making a diagnosis. A diagnosis is one only which includes a thorough conception of every condition in the entire nasal cavity. Every nook and corner must be inspected, for you may find in a patient with a septum deviation other and more important conditions, including

an empyema of one or more of the accessory cavities in the nose.

Another case comes with the history of headache which does not yield satisfactorily to your treatment; you decide it is a case of eyestrain and send the patient to an oculist. The results, so far as cure of the headache is concerned, are not as satisfactory as you had hoped for, the patient is perhaps referred to a second oculist with no better results. Eventually the patient may seek some one else or possibly from the history the fact develops that he is worse often after lying down or the headache is worse about the time he gets up in the mornings, improving later in the day. He may complain of some stoppage in the nose on one side. Anterior rhinoscopic examination shows either a high up deviation of the septum, as in the previous case, or else a swollen condition of the middle turbinate with close contact between the middle turbinate and the septum. After using cocaine between the surfaces for its shrinking effect, you may find a clear space with relief of the headache. This would indicate that the swelling of the soft parts (the mucous membrane) was the cause of the contact and pressure. If you find that the contact persists even after the use of the cocaine, then the contact must have been due to a deflection of the septum or to an actual increase of width of the middle turbinate. These are the cases which are often responsible for the severer forms of neuralgia. By palpating such a middle turbinate with a probe, you find it bony hard. The diagnosis is that of either excessive scrolling of the turbinate or a dilated ethmoid cell. These conditions may produce no particular interference with nasal respiration; in fact, I have seen and operated two such cases associated with atrophic rhinitis.

Another patient comes complaining of the loss of the sense of smell, with a dry throat, attacks of hoarseness, worse in winter. The patient has a foul odor to the breath. Examination of the nasal cavity reveals a wide open space and the mucous membrane barely visible because of a coating of dirty looking crusts which adhere stubbornly to the mucous membrane. After douching out the nose with some preparation containing bicarbonate of soda, the crusts loosen more readily. Examination of the pharynx and larynx show them to be dry and glistening because of the presence of dried secretion. The parts look varnished with it. The tyro should have no difficulty in making a diagnosis of primary atrophic rhinitis (ozena).

Another case comes complaining of having had a recent cold or influenza, more often the latter, which left him with either a neuralgia or sense of fullness and pressure, or all combined, associated perhaps with some swelling in the cheek about the inner corner of the eye or just above the orbit. The history suggests an abscess and in those cases which recover spontaneously the patient often refers to the attack as one of an abscess in his head which subsequently broke and discharged pus for some days accompanied with a relief of symptoms. In the severer cases an examination may reveal percussion tenderness often very pronounced over the area complained of. The thermometer reveals the fact that the patient has some fever. Inspection of the nose shows the appearance of a recent acute rhinitis. After cocainizing one is able to detect swelling about the lateral aspect of the middle turbinate on the affected side, even to the extent of an acute inflammatory oedema. Eventually with the use of cocaine or cocaine and adrenalin one is able to open up a slight space between the middle turbinate and the lateral wall (middle meatus) when a drop or two of pus may be seen. This presence of pus would confirm the suspicion of an empyema of one or more of the anterior set of accessory sinuses (frontal, anterior, ethmoidal or maxillary.)

In other cases where the headache or neuralgia has been more posteriorly or even in the back of the head, one may observe the presence of pus between the middle turbinate and septum when the diagnosis of acute empyema of one or more of the posterior set of accessory sinuses can be made. A more detailed examination, which is necessary for a differential diagnosis of empyema of individual cells is not expected of the general man.

The presence of pus in these areas with but few or no symptoms are due to chronic empyema. It is well to hold such cases under observation because of the possibility of an acute exacerbation.

The subject of this paper cannot be covered in a half hour. I have merely touched very briefly upon some of the more frequent conditions.

EPITHELIOMA.**ITS MANIFESTATIONS, DIAGNOSTICS, AND SUCCESSFUL TREATMENT WITH SOLIDIFIED CARBON-DIOXIDE, WITH DEMONSTRATION OF CASES AND TECHNIQUE EMPLOYED IN THE TREATMENT THEREOF.**

BY

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(Read before the Homœopathic Medical Society of Chester, Delaware and Montgomery Counties, at Philadelphia, Pennsylvania.)

It is not my intention to enter into the histo-pathologic details of epithelioma, nor attempt to explain the many controversial opinions regarding its etiology.

From our present knowledge we know that epithelioma is the result of a slow, persistent sort of irritation carried over a long period of time, and not to a passing irritation, as it were, although many times repeated.

Epitheliomas frequently follow the result of some existing seborrhœic condition, which in itself is the result of an existing irritation of the seborrhœic glands.

Small warts, likewise, may be the fore-runners of epithelioma, especially in the retrograde age of life.

Pigmented moles are now, likewise, considered as being pre-epitheliomatous, and, as well, are the senile concrete seborrhœas.

It is important to bear in mind at this point that the scars of previous existing conditions of the skin which have been treated with caustics or destroyed by acids have a marked tendency to break down into epitheliomatous degeneration,—a case of which I will cite during the progress of my paper.

Epitheliomas are usually found on the face and neck and the muco-cutaneous junctions. They usually occur singly, but may at times be multiple—usually multiple when they are the result of existing senile keratoses.

Their most frequent location seems to be upon the lower lip. The nose and cheek seem to be favorite seats, while just below the inner canthus is as well a favorite location.

Epitheliomata are usually painless while they are of the superficial type, the pain not appearing until the ulcerations become deep; then the pain is most severe and sharp.

It is a peculiar fact that most epitheliomas are to be found on those parts which are continually exposed to the light.

The growth of epitheliomas varies considerably. Often small superficial cancers remain quiescent for a long time, and may then become intensely active, destroying deeper tissues with no limitation of their onward march.

The question of metastasis in epithelioma varies, of course, with the depth of the growth and, as well, with its location.

The superficial forms, which spread mostly along the corium without going deeply beneath it, are naturally least liable to have metastasis. This may be said to be especially true of the rodent ulcer type of epithelioma where metastasis usually never occurs.

Yet it can be definitely stated that epitheliomas which develop deeply are very likely to have metastases form quickly. Where the epitheliomata are situated in close relationship to the lymphatics then the metastases are apt to form more quickly. For instance, at the muco-cutaneous junctures like the lips there is great danger of metastasis,—a case of which I hope to show you and give the initial treatment of to-day. But even here in this location, if the growth is a slow one, metastasis likewise is apt to be very slow in developing.

Regarding the manifestations of skin cancer, we may classify them under three headings; that is to say, the superficial type, well known as the flat epithelioma.

They are usually the result of degenerated seborrhoeic patches, and may present themselves as flattened infiltrations or warty out-growths. They show a tendency to become covered with reddish or brownish yellow crusts, which on being removed produce a slight bleeding, with the formation of a new crust. This process is continued until ulceration is formed, which is usually sharply defined, more or less rounded, has a pearly edge, and is quite indurated. The case is usually easily disposed to bleed, is hard, reddish in color, usually uneven, and secretes a yellowish-reddish fluid.

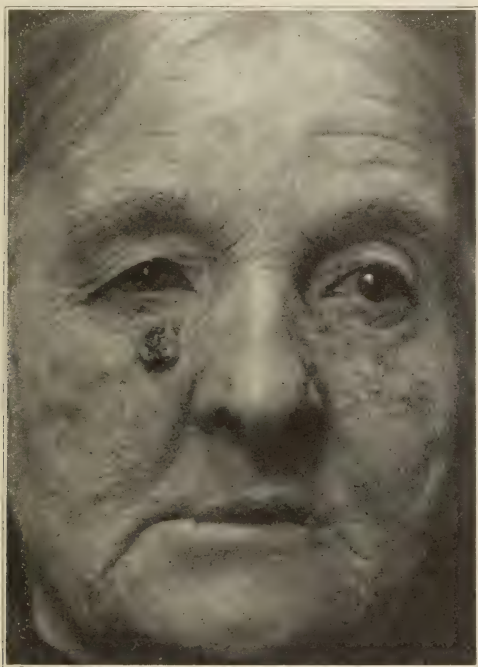
As aforesaid, there is practically no pain whatsoever. There

may be a slight itching. This manifestation is usually to be seen upon the face, although it may appear upon the trunk or hands or neck or scalp.

Regarding the question of rodent ulcer, which is merely a term applied to the deep ulcerative forms of epithelioma, I might state that there is usually a great destruction of the tissues in this form of epithelioma, even at times the bones themselves becoming involved in unchecked cases.

It usually begins as a rather reddish or brownish tubercle, and which has existed for a long time.

The rodent ulcer type of epithelioma cannot practically be considered as a neoplasm, but quite to the contrary it rather



No. 1.—Craterform Epithelioma. Rapidly growing type of four months' duration. Before treatment. Courtesy of Dr. John G. Fischer.

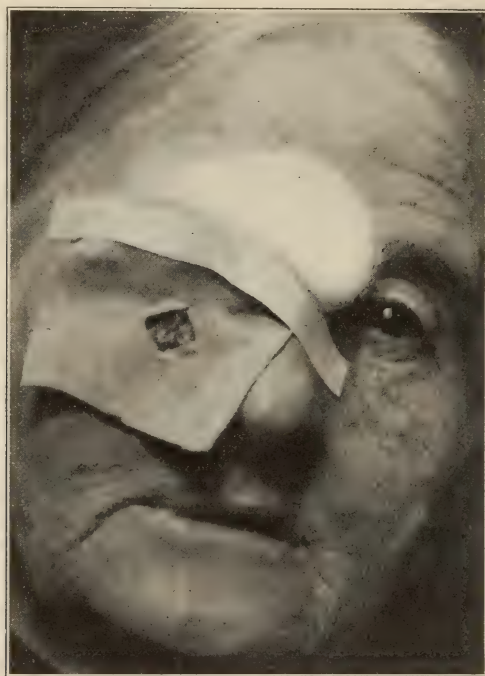
destroys tissue. It is usually to be found upon the forehead, temples, nose or upon the eyelids.

The deep form of epithelioma, likewise known as the infiltrating or nodular type, may have its development from a superficial epithelioma or even from a deep-seated nodule having its seat in the sub-cutaneous tissues.

It usually has its beginning as a nodule, which is hard, either rounded or flat, and may have a shining reddish or bluish color.

After existence for some time ulceration takes place, usually of the deep type, being irregular in outline, with an easily bleeding base and hardened everted edges, and is usually surrounded by an area of redness marking the onward spread of the existing condition.

In this type there is usually involvement of the lymphatic



No. 2.—Same Case. Previous to treatment. Showing surrounding areas protected with chamois and orbit protected by absorbent cotton.

glands, and the pain is most certainly acute and severe, the patient eventually succumbing.

The papillary type of epithelioma usually occurs at the muco-cutaneous junction, although it is occasionally seen upon the backs of the hands. This form of epithelioma, as well, occasionally involves the penis, the labia, and of course is progressive and, as a rule, malignant.

There is fissure formation and marked ulceration. It usually begins as a small wart-like elevation, usually pea size,

and gradually spreading until it becomes a spongy papillary growth. The surface may be moist and covered with marked secreting granules, or it may be dry, covered with yellowish scales.

There is a form of benign cystic epithelioma, so called by Fordyce. The lesions usually consist of a pin head to pea size, reddish, pinkish or pale yellowish tumor which are somewhat terse, rounded or oval, and are painless. The glands are not involved and the health is usually not affected.



No. 3.—Same Case. Applying Solidified Carbon-Dioxide through hole in chamois placed over the lesion.

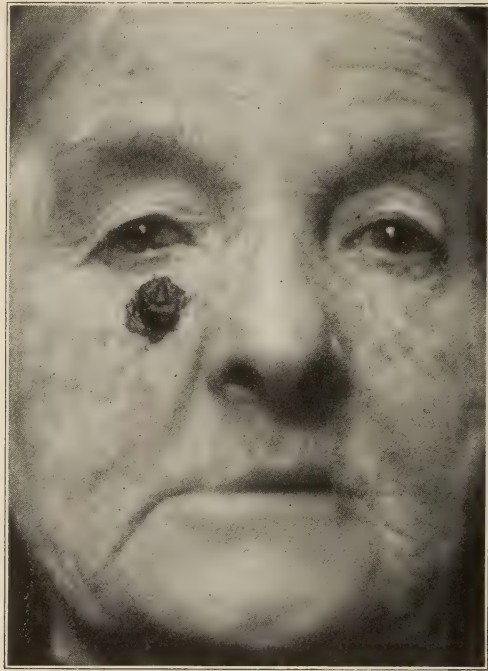
I had hoped to have a case of this form of cystic epithelioma to show you to-day, but my patient, being out of town, is unable to be here; this case being the resulting degeneration following the application of nitric acid to a previous existing mole.

This form of epithelioma usually contains a viscid yellowish fluid. While I have just given a hurried description of the usual types of epithelioma, it must certainly be constantly borne in mind that the clinical pictures of skin cancers certain-

ly include a large number of types which are not generally recognized as belonging to any particular group, but are sometimes mistaken for the infective granulomata and other skin diseases.

In some of the lesions the outer margins do not seem to be at all elevated, nor do they have that characteristic pearly margin, but have a rather depressed center at their beginning, showing little aptness to ulcerate.

I recall in particular a case of this character which consisted of several lesions which had been diagnosed by competent au-



No. 4.—Same Case. Showing typical scabbing, which lasted six weeks.

thorities as lesions of leues because of the fact of an early history of such a condition. The microscope, however, clearly demonstrates their true character.

Regarding the recognition of epithelioma, the possible conjurers would be lupus vulgaris, and the ulcerating form of tubercular syphiloderm.

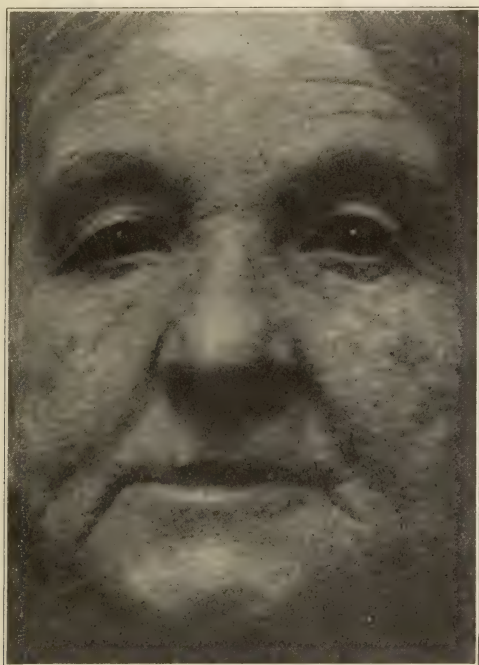
In diagnosing epithelioma we should constantly bear in mind the patient's age of life, should as well recall the fact of

the tendency of senile keratosis and degenerating seborrhoeic patches to become epitheliomatous in character.

The clinical pictures of epithelioma are usually sufficient to enable the expert to make a diagnosis upon them alone; but the safest course to pursue in nearly all cases is to confirm that clinical diagnosis by microscopic examination.

Any existing constantly inflamed area in the aged showing evidences of degenerative changes should always be looked upon with suspicion.

Lupus should rarely be confounded with epithelioma except



No. 5.—Same Case. Showing healed area. No scarring. Smooth area with normal epithelial covering. The case had received three freezings at intervals of three weeks. Internal medication, Condurango 6x.

in those unusual types which are to be seen before the fortieth year of life.

Lupus vulgaris usually develops before the age of puberty, but of course not always so. Epithelioma usually occurs later in life.

Lupus may give a history of tuberculosis in the patient or an antecedent history in the family. The nodules in lupus are

soft, while the nodules in epithelioma are hard. The ulcerations in lupus vulgaris are usually superficial with undermined edges, the discharge being sero-sanguineous with slight crusts, and which are usually of a reddish-brown color, and there may as well be marked scaling. The edges of the epithelioma are usually hard and pearly, and the discharge is usually scant. In the deep form of epithelioma there is usually intense pain, while this factor is absent in lupus vulgaris.

The tubercular ulcerating syphilide is at times confusing with epithelioma, but this likewise usually occurs in early and middle life; epithelioma, of course, occurring in later life.

Syphilis occasionally gives the concomitant signs and symptoms with perhaps a history, while epithelioma may give a history of chronic irritation. The tubercular syphilide would have a rapid advancement, while that of epithelioma would be slow in its evolution.

Ulcerating syphilides may be multiple, while epitheliomata are usually single. There is no pain in the tubercular ulcerative syphilide, while that of epithelioma is deep and more intensely painful. The discharge from a syphilide would be yellowish and creamy, while that of an epithelioma would be rather scanty.

The edges of an epithelioma would be hard and pearly, while those of a syphilide would usually show an absence of induration. A test treatment of three or four weeks would show rapid healing in a syphilide, whereas in epithelioma there would be absolutely no response whatsoever.

Regarding the topical treatment of epithelioma, I shall limit myself absolutely to their successful treatment with Solidified Carbon-Dioxide, giving the experience of numerous cases treated during the past two years in my own private as well as clinical practice.

I make one statement merely regarding the methods of treating epitheliomas with so-called arsenic plasters, acids and caustic, as aforesaid, and that is their ever ready tendency to break down and again degenerate. This has not been the case when Liquid Air or Solidified Carbon-Dioxide has been used in the treatment of these cases during the past ten years, so far as I can glean.

Solidified Carbon-Dioxide offers a practically painless method of procedure, is comparatively short in its duration in comparison with other methods of treatment, the operator always having the action of this chemical agent at his minute

control, being always able to regulate the depth of his freezing by the pressure exerted and the time consumed.

Solidified Carbon-Dioxide seems to have the happy faculty of permitting epithelium to regenerate so that scarring is usually absent. If any scarring at all is to be found, it is usually very superficial and pliable; the usual result being either a normal epithelial covering of flesh color or perhaps a slightly whitened area at the site of the previous lesion. This is not the rule when caustics or other agents of a destructive nature are used—marked, unsightly scarring usually the result.

That we have in Solidified Carbon-Dioxide a most efficient agent for the treatment of Epithelioma cannot at this time be denied, for the universal opinion of those who have investigated its use in that line of work seems to be unanimous, some having had but little experience in few cases and others having had a greater experience. Freezing is an old therapeutic measure which has been tried in many ways.

Liquid Air, having first been used by Drs. A. Campbell White and Tripler, does not seem to have been any more effective than Carbon-Dioxide in its freezing process; Liquid Air, however, requires expensive armamentarium and is not easily obtainable, and is quite volatile, and therefore not easily usable.

It was Pusey, of Chicago, who first mentioned the possibilities of Solidified Carbon-Dioxide as a substitute for Liquid Air. This was somewhat more than two years ago, and ever since that time Carbon-Dioxide has been investigated as a destructive agent for the cutaneous neoplasms and with marked success.

At the same time that Dr. Pusey mentioned the substitution of Solidified Carbon-Dioxide for Liquid Air, Dr. M. Juliusberg, of Germany, suggested its use in the place of Ethyl Chloride which he was attempting to use as a freezing agent in certain dermatoses.

Solidified Carbon-Dioxide is about one-half as cold as Liquid Air, being about 90 degrees Centigrade, while that of Liquid Air is 180 degrees Centigrade.

The thought had struck me that its temperature might still be lowered by mixing with either Ether or Chloroform. I found, after repeated experiment, that such was the case, the temperature being reduced still further 60 or 70 degrees Centigrade.

I find that Drs. Jackson and Hubbard, of New York, mention, in a recent article on the subject that the Mayo brothers

had found that mixing Ether with Solidified Carbon-Dioxide made it freeze more rapidly, and their results in this respect coincide with my own.

I have found it of decided advantage, especially in the treatment of epitheliomas, to reduce the temperature by the addition of Ether; the details of which I will enter into later on.

Carbon-Dioxide is solidified because of the rapid evaporation of the gas through some porous material. For this purpose chamois skin is usually used, which is wound around the outlet of the tank in a way which I will shortly demonstrate.

Its action, of course, upon the cancerous tissue depends entirely on its ability to immediately and intensely freeze the part, producing, as it were, a dry form of gangrene which nature takes care of and in a short space of time absorbs, causing the cancerous growth or any other neoplasm to entirely disappear.

There are several appliances for Solidified Carbon-Dioxide, none of which, however, have appealed to me as being of any better advantage than using the chamois skin wound about the escape valve of the tank containing the Carbon-Dioxide.

The Carbon-Dioxide should usually be allowed to escape slowly at first, and then more rapidly, which seems to form a more solid ice.

After the chamois skin retainer has been filled with the Carbon-Dioxide, which is now called "Carbon-Dioxide Snow," after Pusey, because of its resemblance, it can be moulded or packed in any shape in which it is desirable for treating the lesion. It can as well be cut with a knife or whittled into any possible shape.

In handling the snow the fingers should always be protected by several layers of chamois skin because of its intense frigidity.

It is usually advisable to protect the surrounding skin by chamois, cutting a hole in the chamois skin of sufficient size to fit the lesion, and then applying the snow immediately upon the lesion. It is well to protect the eyes by cotton, or when working near mucous membrane to protect them by several layers of gauze in order to prevent the snow from freezing itself fast to the mucous membrane.

Solidified Carbon-Dioxide usually freezes well beyond the area to which the frozen mass is applied, so that one is usually

always sure of being able to treat well beyond the affected parts.

Immediately on applying Solidified Carbon-Dioxide to the cancerous tissue it takes on an appearance of white ice quite similar to that of Solidified Carbon-Dioxide itself.

As aforesaid, the depth of the freezing depends entirely upon the length of time and the amount of pressure exerted. It is certainly difficult to give any exact rule as to the length of time any special lesion should be frozen; experience alone guiding the operator. Suffice it to say that Epitheliomas or other deep seated conditions demand certainly longer time for treatment than those which are quite superficial.

The working rule seems to be that it takes the frozen area twice as long to thaw out as it did to freeze it, and it has always been my working rule to freeze a part several times, permitting it each time to thaw out before again freezing.

Within a very short time after freezing a wheal like eruption presents itself, characterized by a slight eruption or blebbing which soon forms into a crust which usually happens within twenty-four hours. The crust usually remains for from ten days to three and sometimes four weeks; one crust which I recall upon a rodent ulcer remaining for six weeks, falling off leaving a smooth, white, scarlet area.

Occasionally there may be slight scarring which always seems, however, to have a tendency to gradually disappear. It can most certainly be said that the resulting scars, if any, left by the freezing process are usually very pliable, and from a cosmetic standpoint are most certainly more beautiful than those left from any other agent used for a similar purpose.

It has been demonstrated that reaction is much more intense in the earlier years of life than in those who are senile.

Experience has demonstrated that it is inadvisable to treat the same part of a lesion oftener than once in perhaps two or three weeks, never freezing until entire reaction has taken place from the previous treatment.

Jackson and Hubbard state that in the ten years which they have been employing the use of Liquid Air and Carbon-Dioxide they have seen no untoward effects.

No application or dressing whatsoever under any circumstances is to be applied after the treatment. Nature seems to provide a crust or dressing which cannot possibly be imitated.

Occasionally, when working about the orbit of the eye there

is intense reaction following with marked swelling, usually closing the eye. This, however, has been perfectly harmless and usually disappeared within the course of twenty-four hours, usually disappearing during the night.

If you should ask me if this routine of treatment is painful, I should state that my experience has varied from patients who have stated positively that they suffered no pain, simply a slight stinging or burning sensation, to that of one patient whom I am at present treating for lupus erythematosus who finds the pain almost unbearable, her skin seeming to be extremely sensitive and tender. The rule, however, seems to be that the patient is unable to determine whether the sensation is that of one of extreme cold or heat.

Regarding Epitheliomas, I quote from Drs. Jackson and Hubbard in a recent article, in which they say:

"Epitheliomas, especially of the rodent ulcer type, we have come to regard as a special field for freezing. A cure is effected more rapidly than by any other form of caustic and with less pain, and the scars are the best. In them the pressure must be firm and the time of freezing from a half minute to a minute and a half, depending upon the depth of the ulcer and the thickness of its walls.

"Other forms of the disease may be cured by it, and inoperable cases should always be tried.

"X-rays do not stand in comparison to Liquid Air or Carbonic Acid Snow in the treatment of superficial Epitheliomas. They are very slow in producing a cure, and their use is always attended with dangers. Freezing is rapid in results, and its use is entirely devoid of danger. We have been able to follow some cases for years without recurrence."

I have to report a case of degenerated sebaceous cyst upon the temple of a male patient who was referred to me for treatment, having received previous treatments of the X-rays with a slow improvement. The patient was 64 years of age, and after having received three treatments of three minutes each, with firm pressure, three weeks apart, the patient was discharged as cured,—the lesion having healed over with a smooth, white scar.

I have another case to report which was referred to Prof. Leon T. Ashcraft for a confirmation of diagnosis of chancre of the lower lip. The diagnosis was not sustained and was referred to me for Carbon-Dioxide treatment of epithelioma

of the lower lip of the nodular type. Patient received four treatments of five minutes each, which extended over a duration of three months. Patient discharged as cured with no appreciable scarring whatever and normal epithelial covering. Patient was 42 years of age.

A case of Paget's disease of the nipple was given two treatments of two minutes each, with firm, hard pressure, at intervals of four weeks; patient discharged as cured with loss of nipple, but a smooth, white area resulting. Patient was 47 years of age.

A case referred to me by Dr. F. R. Shute, with the following pathological report:

"Diagnosis—Squamous epithelioma; the diagnosis being based upon the observation of the over-growth of epithelium which penetrated into the underlying connective tissue in root-like extensions, in one of which was observed a typical, well-formed cancer nest or pearly body. Of course, these pearly bodies also occur in the hard papilloma or wart, but in that case are very superficial and not so well formed.

"In this specimen there are also evidences of an inflammatory process as shown by the round cell infiltration. Such inflammation is not present in the hard papilloma."

This case of typical superficial Epithelioma received two freezings, one of three minutes and another one of three minutes. Entire treatment lasting four weeks. Patient was discharged with no scarring whatsoever, having a perfect epithelial covering. Patient was about 37 years of age.

I have to report a case of cystic epithelioma of the nape of the neck, referred by W. M. W. Sloan. This patient's age was 37 years, and had been previously treated by caustics with the resulting cystic degeneration. Patient received two freezings of one and two minutes each, two weeks apart, with entire healing with the exception of a hard indurated outer edge. Patient failed to return for further treatment, having had to leave the city.

I have to report a case of epithelioma of the cheek in a woman 83 years of age, kindly referred to me by Dr. J. A. Fischer, whose photographs I demonstrate to you to-day with the tank, showing the preparation of the patient, the protection of the orbit and surrounding skin, the application of the ice, the typical scabbing, and finally the cured condition showing

no scar, normal epithelial covering, having received three treatments averaging three weeks apart.

Dr. E. R. Richie has kindly referred to me a case of epithelioma of the right ala nasæ in a patient 68 years of age which is still under treatment, having received two freezings of two minutes each with marked improvement and tendencies for ultimate recovery.

A case of epithelioma of the tip of the nose in a female patient aged 55 years, referred by Dr. Alexander Uhle, received three freezings of one, two and three minutes each respectively during a period of ten, seven and twenty days apart. Discharged as cured with no scar and normal epithelial covering. Patient was 72 years of age.

Dr. W. H. Yeager referred a case to me of epithelioma of the superficial type of the left ala nasæ in the furrow, being the result of seborrheic degeneration, received three treatments of three minutes each, three weeks apart, with no scarring, and pinkish epithelial covering.

A case of ulcerating epithelioma of the bridge of the nose, extending on the right side, of one year's duration, referred by Dr. D. J. Langton, in a patient 65 years of age. This was a markedly ulcerative type and received three freezings, three weeks apart; was discharged as cured with a whitish area resulting which does not seem to be scar-like in nature, being soft and pliable and slightly whiter than the surrounding skin.

A case of epithelioma of the tip of the nose in a male aged about 55 years, referred by Dr. W. Weaver, received three freezings of one, two and three minutes respectively, with no resulting scar. Patient had been instructed to cease treatment after the second freezing as the lesion seemed apparently relieved, but probably on account of lack of sufficient freezing there seemed to be a slight tendency to recurrence. Final freezing of three minutes seemed to have cleared up the condition, leaving no resulting scar.

A case of epithelioma of the right temple in a woman aged 62, referred by Dr. W. M. Hillegas, from the Union Home for Old Ladies, was given one treatment of one minute's duration and discharged as cured with no resulting scar.

And so I could go on indefinitely reporting cases of epithelioma successfully treated. I have simply picked out a few to show the amounts of freezing and time given.

That is not all; there is one other important point to be

borne in mind in the treatment of these epitheliomatous conditions, and that is the administration of the internal indicated homœopathic remedy, there being no doubt whatsoever that it assists in bringing about a regeneration of the existing lesions, increasing the patient's opsonic index, therefore increasing the patient's ability to increase the amount of antitoxic serum necessary to combat the existing lesion, and naturally, of course, increasing the local resistance of the part.

Among the more important homœopathic remedies which I have always administered at the same time as giving topical treatment, and which certainly should be given for a long, long time even after the lesion seems apparently cured, are:

Thuja, sepia, ars. alba., condurango, nitric acid, hoang nan, petroleum and guarana.

Therefore, in closing, permit me to thank you for the honor conferred in being able to address your very worthy society, and at the same time permit me to make a plea for the use of Carbon-Dioxide in the treatment of cutaneous neoplasms for the following reasons:

Short duration of treatment.

Practical absence of pain.

Ability to reach areas beyond involvement.

Cosmetic effect obtained.

Scarring practically absent.

Epithelial covering usually the rule.

Lack of violent dermatitis usually reacting from the use of caustics, X-rays, etc., and apparently no tendency to after degeneration.

ANAPHYLAXIS IN MEASLES.—Corominas (*Rev. de Ciencias Med de Barcelona*, Oct., 1909) relates the cases of three children, A, B, C, of the same family, in whom the eruption developed as follows: A, April 4, a light case; B, April 7, more serious; C, April 20, very grave. May 2, A was reinfected, serious; May 12, B, likewise. Apparently A and B had been commonly infected when at school, whilst C got his share from the two school children, A and B. But A and B during their period of anaphylaxis (so regarded by the author) were re-infected by C, thus balancing the account. Corominas is of the opinion that such anaphylactic period in measles may extend over two months, and, if so, children who have recovered from the disease should be guarded against re-infection. Further investigation should be made to determine if other or all diseases conferring immunity, do not also have an anaphylactic period, preceding the permanent immunity of the patient.

TUMORS OF THE BREAST.

BY

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Tumors of the breast clinically may be divided into benign, malignant and doubtful. The border line is not always clearly defined, but in every tumor there is a time before malignancy begins or metastasis develops when radical treatment will effect a cure. Unfortunately in many cases the patient delays seeking advice on account of modesty or fear of operation until the time for a successful operation is past.

If these patients were educated to know that they are losing valuable time and jeopardizing their lives they would be more anxious to consult their physician as soon as the discovery of the lump.

Too often the physician himself is not fully alive to the advantage of early treatment and the danger of delay, but temporizes and watches for symptoms; and when symptoms arise, such as pain, retraction of the nipple and metastasis, the time has gone by for a positive cure and the patient's chances for life have been greatly lessened.

There are some points about the normal breast that I think would be well recalled in studying these tumors. The fully formed mamma is made up of from ten to twenty lobes with ducts radiating toward the nipple and embedded in a stroma of connective tissue. The anterior fascial layer of the breast is attached to the over-lying skin by connective tissue fibres and also sends numerous prolongations into the stroma of the gland, known as the ligamenta suspensoria of Sir Astley Cooper. Processes of gland structure may extend outward and upward toward the axilla or inward and upward toward the sternum; below, the gland is more sharply outlined, firm connective tissue bands with little fat connect the skin with the under-lying structures.

The lymphatic circulation is of great importance in determining the extent of operative procedures. Generally described the chain of lymphatics begin at the nipple and follow the branching ducts to the terminal acini, then connect with longer lymphatics which go to the axilla, the inferior clavicu-

region—and an inner chain which follows the internal mammary artery and empties into nodes in the anterior mediastinum.

I recently had an opportunity to note the spread along the lymphatics following the internal mammary artery. The nodules were found in the fourth intercostal space and even adherent to the pleura. No attempt was made to remove them; simply the breast which was ulcerating and giving pain was amputated, giving some temporary relief.

Normally at the time of puberty the breast hypertrophies, the nipple becomes larger and more vascular, the areolar zone of epidermis wider and pigmented; ducts and acini develop with new connective tissue about them. In the second month of pregnancy lactation-hypertrophy develops with corresponding changes in nipple, and the number of acini is increased at the expense of the breast stroma. Up until 25 years of age tumors of the breast are usually benign; though I have personally seen a carcinoma in a young woman 26 years of age.

The two most common benign tumors are the intra-canalicular myxoma and the fibro-adenoma. The intra-canalicular myxoma, so-called peri-ductal fibroma, is often multiple and may appear in both breasts. The age of onset is usually less than thirty. About 20 per cent. are multiple. The tumor is freely movable, lobulated and elastic upon palpation and grows slowly. It is encapsulated and upon section can be recognized by its myxomatous lobules. At times it is very large and tends in later life to become sarcomatous. Occasionally in early life the multiple variety may disappear.

The next benign tumor in order of frequency is the fibro-adenoma, usually a single tumor, though sometimes found simultaneously in both breasts, usually situated in the upper outer quadrant of the breast. It is generally quite hard, not lobulated, freely movable and often painful and tender. It may grow rapidly or remain quiescent for years and then take on carcinomatous changes. The tumor is encapsulated and upon fresh section shows the fibrous structure and a variable amount of parenchyma according to the age of the tumor.

In a case of this variety of tumor in a patient about the cancer age, the growth was not in the upper outer quadrant but near the center of the breast and pressure upon it would retract the nipple. There was a suspicion of malignancy and

while the patient was under the anesthetic the tumor was quickly removed and sent to the laboratory where a frozen section showed it to be a fibro-adenoma necessitating only enucleation.

Tuberculosis of the breast occurs after puberty-hypertrophy. It runs a course usually of from six to nine months. It may be found in the lactating breast and must then be differentiated from pyogenic mastitis. The symptoms are, at first an area of induration usually near the nipple zone, followed by signs of an abscess. The temperature is that typical of local tuberculosis and the tuberculin reaction is present. The abscess later spontaneously ruptures with sinus formation. One breast only is involved, as a rule, though both may be.

I operated on such a case seven years ago. The left breast first became affected and an abscess formed. Upon incision, curd-like pus was found and granulation tissue was recognized lining the cavity. Amputation was advised but refused. Subsequently the whole breast became involved and had to be removed. In a few months the other breast was affected in the same manner and was amputated. The patient is in good health at this time.

Senile parenchymatous hypertrophy occurs during the cancer age and must be differentiated from carcinoma. This can often be done at the time of operation. If one or more simple cysts are present the lesion is a benign one, and a conservative operation can be performed. One or more large cysts may develop in one or both breasts; or, in another form, small cysts develop. In this variety the hypertrophy is due to epithelial activity within the ducts and acini, producing cavities filled with epithelial cells and debris. This is the adenocystic type and shows a tendency to degenerate into adeno-carcinoma.

In women subject to this disease, approaching the menopause, epithelial activity takes place in one or more areas of one or both breasts; first, the parenchyma increases and then the epithelial cells proliferate and degenerate, and the ducts and acini dilate. In the adenocystic form there is a proliferation of epithelial cells, and in the true cystic form the epithelial cells completely degenerate.

Clinically the mass may be a circumscribed tumor, and area of induration, or a definite enlargement of a quadrant or hemisphere of the breast. The large cyst may be outlined and some-

times fluctuates, and is the variety that presents as a circumscribed tumor. The indurated area is made up of small cysts surrounded by fibrous stroma. The enlarged zone is due to the adenocystic type. The adenocystic type may show a strong tendency toward carcinomatous changes, probably due to the active proliferation of epithelial cells, while in the true cystic variety the cells degenerate and the tumor is usually benign.

Carcinoma, the most common tumor of the breast (67 per cent.), may be classified as adeno-carcinoma, medullary and scirrhous. The adeno-carcinoma gives the best percentage of cures and this is the most operable type. The onset is usually between forty and fifty, though you may find it anywhere over twenty-five years. It may follow a fibro-adenoma. Ferguson has just reported a case where a tumor was in each breast in a woman 45 years old. In one breast there was an adeno-carcinoma, and in the other an adenofibroma.

In one form of this tumor there is a predominance of the basal cells, and the tumor is relatively benign, metastasis taking place late. It begins as a circumscribed tumor; and, if untreated, gradually infiltrates the skin and may ulcerate, or may become fungous slowly and destroy the breast, cicatricial tissue partially taking its place.

To illustrate, I operated a case of this variety of tumor three years ago. The patient, aged 45 years, had a large fungating growth which had been present for years. There was no axillary metastasis, and simple ablation of the breast was performed. There has been no recurrence.

The adenocystic type of senile parenchymatous hypertrophy may degenerate into a diffuse adenocarcinoma with large aveoli of epithelial cells like basal cells of the ducts. The medullary carcinoma is a more malignant type. The age of onset is from 28 to 65, and it is usually the cancer of the lactating breast. The tumor is at first small and circumscribed, but grows rapidly and when the axilla is involved the outlook is grave. Microscopically the epithelial cells are of the large glandular type, irregularly arranged.

One case I recall of this variety, the complete operation was performed and the axillary glands were found to be infiltrated by the same kind of cells as the primary growth. This was a very malignant tumor in a patient 55 years of age. The growth was rapid and metastasis early.

The scirrhus is the most common form of cancer, 20 per cent. It may occur in the young, even at 20 years, but is most common between the ages of 30 and 70, and is the most common tumor after 60 years of age. It quickly manifests characteristic symptoms of malignancy, and, while apparently in some cases it is disappearing, it is slowly infiltrating and extending through the lymphatics.

It is the large scirrhus that belongs so often to the inoperable class. The atrophic form of scirrhus is usually beneath or near the nipple. It grows very slowly and the breast gradually atrophies. The patient may live ten or twelve years, the breast slowly ulcerating.

Sarcoma may arise as a myo-sarcoma from an intracanalicular myxoma of the breast. The tumor can be recognized by the history and its lobulated structure. It may become quite large and usually occurs in middle life or later. The small indigenous sarcoma is sometimes hard to differentiate from a fibroadenoma, or, later, from a small carcinoma. It usually occurs near the center of the breast and may be cystic.

In the symptomatology of tumors the most important symptoms are the presence of a palpable tumor, its history, and the age of the patient. Pain is not a symptom of malignancy. When it does appear, the growth is well-advanced. It is a late symptom, just as dimpling of the skin and retraction of the nipple and metastasis are. Pain is more commonly found in benign lesions.

In some cases there is a discharge from the nipple which may be bloody from a cyst with an introcystic papilloma. Enlarged axillary glands are not always evidence of malignancy, as they may be enlarged from various causes, and have no direct connection with the tumor.

Internal metastasis may occur when the tumor apparently is small. Direct extension may occur through the chest-wall to the pleura and an insidious pleurisy with effusion may result. Occasionally the lungs are involved. I have seen two such cases.

The spine may become affected and neuralgic pains and a spastic paralysis may take place. A chronic eczematous affection of the nipple with ulceration, described as Paget's disease, is sometimes associated with carcinoma of the breast.

The treatment of a benign tumor should be conservative.

In multiple tumors, intracanalicular myxoma, in patients under 25 years, a little delay to observe the course of the growth is justifiable, as occasionally they disappear. However, they should be watched closely; and if there is any doubt, they should be excised. Every single tumor of the breast should be removed with as little mutilation as possible. The incision at the junction of the breast and the chest-wall can sometimes be employed, and gives excellent cosmetic results.

The earlier the malignant tumor is operated the better; and when a carcinoma, the complete operation comprising all, or a portion, of the major pectoral muscle and the lymphatics of the axilla should be performed. In the late cases it is often a question how much to undertake in the treatment. In cases in which the supra-clavicular glands are enlarged, we cannot hope to do more than palliate; and, if we attempt too much, only hasten the end.

If the breast in these cases is giving distress from pain or ulceration, a quick ablation, without going for the metastatic growths will give them some comfort. The metastases can be treated by the X-rays. The treatment of sarcoma is simple amputation of the breast, as the lymphatics are not involved. In the sarcoma developing in the large intracanalicular myxoma the diagnosis can often be made before operation; but, in small sarcoma arising in the stroma of the breast a clinical diagnosis can not always be made. Among the malignant tumors of the breast the great majority can be recognised clinically before operating. A certain doubtful class, however, are to be classified at the time of operating.

RAPIDLY FATAL PSYCHOSES.—After observing and examining seven cases clinically and anatomically, Thoma, (*Allgemeine Zeitschrift f. Psychiatrie u. psychisch-gerichtliche Medizin*, B. 66, H. 5) arrives at the conclusion that the symptom-complex described as *delirium acutum* (incoherence, confusion, hallucination, jactation, more or less profound, sometimes variable obscuration of egoscience) is not a unitary morbid process nor due to such. The same syndrome develops in cases of paralysis, in senility, in primary dementia, and in acute disturbances of the circulation, and a common etiology is not demonstrable. Possibly, rapid physical changes in the cerebral substance are causative of the swiftly fatal course. An hereditary predisposition appears to favor the development of the condition.

MENSTRUATION.

BY GEO. C. WEBSTER, M. D., CHESTER, PA.

A BLOODY mucus discharge from the uterus, containing some uterine and vaginal epithelium, recurring at regular periods from puberty to the menopause (except when interrupted by gestation, lactation or disease) we call menstruation.

Its cause, its use, its significance we know not; many conflicting opinions regarding it have been put forth, some strange, some even superstitious.

At one time not far distant, it was thought that the whole of the corporeal mucosa was stripped off clear down to the muscular layer, at each menstrual period; later it was believed that only the epithelial layer was shed. Another view was that during the intermenstrual period a newly organized tissue was developed, and that this was thrown off with the menstrual flow. Since Gebhard, of Berlin, made his careful research, we believe all of the above theories to be false, for he made the startling statement that "there is no shedding, even of the surface epithelium during menstruation," and that the anatomical changes are as follows: First, there is a pre-menstrual congestion, the connective tissue blood vessels of the endometrium share in the general pelvic congestion, effusion of blood takes place into this connective tissue and travels in the line of least resistance, which is of course towards the surface; here it collects in small hemorrhagic spots forming subepithelial hæmatomata; this is the second stage. The third stage is brought about by the increased blood pressure, which finally passes between the epithelial cells, lifting some of them from their basement, and occasionally carrying some of the cells away. The pressure having been thus relieved, the hemorrhage soon ceases to pass through the barrier, the remaining blood being absorbed, and any denuded areas repaired, thus completing the anatomical events of menstruation.

This is interesting, and well for us to know, for it may lead to a better understanding of some of the local as well as general phenomena of menstruation.

It may be well now to consider the health side of menstruation, in order to understand any departure therefrom. Coincident with the establishment of the menstrual function, are

changes which mark a "critical period" in the life of the female. Changes which affect her whole physical, mental and moral make-up. Her reproductive organs are no longer infantile. She herself seems to realize that a change has taken place, and that she is no longer a mere girl. She has rounded out, her bust and hips have increased, and she has taken on the lines and curves that distinguish her from her brother. She is more dignified and more reserved, in a word she is a woman, capable of child-bearing.

The period of puberty should be understood to include the time necessary for the full physical development, and not just the few months required for the establishment of the menstrual function, for while this indicates that child-bearing is possible, it does not mean that she is fully prepared for the strain of such an ordeal, therefore let us discourage too early marriages. During this period great care should be taken, for it is at this time that our girls are not only taxed, they are overtaxed. School life is no longer child's play. Therefore let us look after the welfare of our girls. Diet, rest, amusements, exercise, dress, and especially after their school-life, and see that they are not pushed with study during their menstrual periods, or with any over-taxing requirements. In this way we will save our patients from the malnutritions, the psychoses, the sterility, the menstrual and other functional disorders we so frequently meet. Many a life has been marred by a lack of proper care at this period of life.

At what age should we expect these changes which proclaim the girl a woman? This is an important question, for much of after health, comfort and usefulness, depends upon these changes pursuing a normal course. These changes do not take place at once, but as the girl nears puberty, they do take place rapidly, and it is at this period that errors in care and treatment may make a hopeless invalid.

In temperate climates (and climate seems to have much to do with it) we expect the menstrual function to manifest itself at about the age of fourteen or fifteen. In warm climates it is a year or two earlier, and in cold climates a year or two later, still there are exceptions to the rule in both directions, and we must not forget the premature or precocious menstruations we sometimes meet with. The menstrual cycle averages about twenty-eight days, but is subject to considerable variation. The flow lasts about five days, the early and latter part of it

being largely mucus, and seems to be an essential part of the flux. The average amount of discharge at one period, while varying much, may be stated to be about six or eight ounces. Here it seems to me that the thing for us to remember is, that whether scanty or profuse, regular or irregular, frequent or infrequent, if it is the habit of the individual, we should consider it normal, unless other symptoms show it to be abnormal.

At the onset of the flow there may be a slight rise in pulse rate and temperature, usually there is, also some physical and mental depression, with sensations of heat and cold, and swelling of the breasts and often the thyroid gland. Fullness, and throbbing in head and weight in back and pelvis. Irritability of the bladder is frequently complained of. These symptoms may be so slight as almost to escape notice, or they may be so severe as to render the woman miserable. If actual pain is experienced we have reached a pathological condition.

The remainder of the paper I will devote to conditions which are considered pathological. And first among these is an absence of menstruation, or amenorrhœa as it is called. Before puberty and after the menopause it is physiological, as it is during pregnancy and lactation, and at irregular intervals during the establishment of puberty and the climacteric.

Atresia of some portion of the genital tract may cause the menstrual flow to be hidden, and is often considered a cause of amenorrhœa, but it does not seem to me to be properly classed with this trouble, for here the menstrual flow is simply dammed up and is therefore unable to make its appearance. Usually a surgical operation is called for to relieve the trouble. It will be well if an early correct diagnosis has been made, otherwise irreparable damage may be the result.

A failure of the genital organs, especially the internal organs, to develop is one of the most common causes for the failure to functionate. Early atrophy is also a common cause, and here I might remind you that occasionally sharp curettage of the uterus for endometritis has been followed by atrophy of that organ.

Many of the acute infectious diseases are capable of bringing about an atrophy of the uterus and ovaries. I might mention scarlatina, diphtheria, typhoid fever, rheumatic fever, etc. Chronic diseases also are etiological factors, but here the amenorrhœa seems to be due to an effort of nature to conserve the blood which is needed for the general nutrition. Change

of climate sometimes causes amenorrhœa. I do not doubt but we all have had cases of foreigners coming to us for the relief of amenorrhœa, and that we could trace the cause to no other than climatic change. Heredity no doubt plays a part in its production also. Anxiety, grief, fright, etc., may temporarily or permanently bring about the trouble. More than once I have observed the trouble in unmarried women who had cause to suspect pregnancy, but later developments proved the trouble to have been caused by anxiety. A similar condition may occur in married women who intensely desire to become mothers.

Dysmenorrhœa, or painful menstruation, is a menstrual trouble that we all are acquainted with, and at times no doubt we feel our inability to cope successfully with. I hesitate even to mention it, for it opens up such a field that even if I had the ability, I could not hope to present a complete picture of it in one short evening, however, I may outline in a degree this nightmare of the tender sex. The pain, which is a prominent symptom of the trouble, may precede the flow and cease with its establishment, or it may increase with it. It may last only for the first day or two or it may outlast the flow. It may be most severe in the back, or loins, or pelvis. It may be constant, intermittent or remittent. It may be sharp or dull, heavy or dragging, radiating or bearing down or like labor pain. It may be associated with a demonstrable local or general lesion, or both, or no lesion may be discoverable. In the former, the cure of the lesion is followed by the disappearance of the pain. The latter are the ones that "stump us."

I find no very satisfactory classification of this disease, the nomenclature is abundant, but from the scientific standpoint is misleading. Tubal, ovarian, membranous, inflammatory, congestive, neuralgic, spasmodic, intermenstrual, mechanical, constitutional, etc.; could it be more confusing? and yet these names may help to describe some of the conditions met with, or we may place all cases under two general headings, local and general. The local conditions associated with dysmenorrhœa will generally be found within the pelvis, while the general conditions are as a rule nutritional. Under the former we have inflammations, tumors, obstructions, malformations. Chronic inflammation of the endometrium may give rise to one of the most painful varieties of dysmenorrhœa, the membra-

nous, as it is called, but inflammation of the uterus, ovaries or tubes may also cause painful menstruation.

Myomata of the intramural submucous and intrauterine varieties are common causes of dysmenorrhœa. The flexions, especially antifixion are causes of painful menstruation. Atresia of any part of the genital tract may cause accumulation of the menstrual blood and give rise to increasing and painful distention. All of the above conditions offer a rich field for the surgeon, who may expect brilliant results from his surgical and mechanical skill, but the field is still open to the man who makes no claim to surgical skill. We have cases of dysmenorrhœa where there appears to be no local lesion, or where the local lesion is so slight as to scarcely figure in the case. Here we must look to the general condition of the patient, and we find that women suffering with rheumatism, gout, anæmia, chlorosis, or malaria are also apt to be sufferers at their menstrual period. If this field is not large enough to satisfy the general practitioner or the non-surgical gynæcologist then we will add to this list, neuræsthenia and hysteria with their long list of intangible, imponderable, invisible pelvic pains which are sure to increase at the menstrual period.

Time will not permit me even to mention other of the menstrual difficulties, and I have purposely avoided speaking of any treatment, hoping that a lively discussion, with personal experiences would prove more profitable than any of my own experience or even what I might cull from authorities and bring before you.

HEMIC DATA IN DISEASES OF THE SPLEEN.—Hess in the *Wien. kl. Woch.*, No. 7, 1910, gives a differential diagnostic scheme of certain conditions when a chronic enlargement of the spleen, with or without leucopenia, is present. Chronic tumor of the spleen, with leucopenia, points to primary neoplasm in that organ, morbus Banti (splenic enlargement with progressive anemia, followed by cirrhosis of the liver) lues acquisita, chlorosis, anemia gravis. Chronic enlargement, without leucopenia, indicates primary or general tuberculosis of the organ, metastatic new-growths, hereditary syphilis, amyloidosis, chronic malaria, chronic stasis, cirrhosis polycythemia, wandering spleen.

CERTAIN CLINICAL PHASES OF CARDIAC DISEASE. (a) MISCELLANEOUS. (b) CARDIAC SYPHILIS.

BY

CLARENCE BARTLETT, M. D., PHILADELPHIA.

(Read by Invitation before the Homœopathic Medical Society of the State of New York, February 9, 1910.)

IN these days of experimental research and laboratory investigation, clinical papers representing as they do the personal experiences and opinions of their authors, cannot be regarded as conclusive in their deductions. At the same time, it must be acknowledged that clinical experience is vast, and were we all in the habit of adding our mite to knowledge already gained, the art of medicine would be enriched thereby. Clinical observations may be in error, as may also be those of the research worker and the laboratory student. Each may also do in the future as it has done in the past, much for the advancement of medicine. One who reads some of the descriptions penned by the fathers of medicine centuries ago must be impressed with their accuracies even in the light of twentieth century science.

The present paper will be divided into two parts, the first of which will detail some personal experiences with cardiac cases; the second will treat of syphilis of the heart. It is hoped that the very brief resume of the cases mentioned is not too much of anecdotal relation. If the histories as given in this paper appear too brief to my audience, let me say that their conciseness is inessential. The data presented may be regarded as reliable in view of the repeated examinations made by myself and others to avoid error. It is to be understood also that the cases reported are single ones, and are therefore logically admissible to prove the exception to accepted rules.

On several occasions I have taken the opportunity of criticising the too prevalent habit of prescribing cardiac stimulants without proper indications. Experience teaches me that it will be many months, possibly years, before the last is said concerning this subject. At this time, I wish only to speak of the practice of administering stimulants when such are not required. Who among us has not seen cases presenting a weakened circulation originating in causes outside of the heart, treated by the full string of circulatory remedies, strychnia, digitalis,

glonoin, amyl nitrite, adrenalin, atropia, caffeine, cocaine, camphor, etc., etc., following each other in rapid succession, the patient in the meantime going on to his death. At autopsy, such lesions as the following have been found: Perforated typhoid ulcer, intestinal hæmorrhage, ruptured extra-uterine pregnancy, appendicitis, intestinal obstruction, intestinal gangrene, etc. Doubtless my hearers can add other conditions to the list. The practice is bad because it delays the time when the surgeon should have been brought into the case, and, what is equally important, lessens his chances for success should he decide in favor of operation. At autopsy, physicians say recovery was impossible because of the serious lesions shown post-mortem. Family and friends derive comfort from the statement that treatment must have been useless. Little is said of the "living pathology," early understanding of which would have saved a life.

The great interest attached to the observation of cardiac murmurs has led us all to place too much importance on them. The presence of a mitral murmur while certainly undesirable, cannot be accepted as of serious significance unless we take into consideration the associated conditions, the most important of which is the manner in which the heart bears up under the work imposed upon it. For many years, it has been a matter of comment that students discover themselves the possessors of murmurs, many of them becoming quite hysterical on the subject. It has furthermore been noteworthy that after the lapse of fifteen or even more years, such students still preserve excellent health notwithstanding the cares of laborious medical practice. The diagnosis of a cardiacal condition cannot be made on one symptom, even though that symptom be so prominent as a murmur.

There is a class of cases characterized by widespread valvular mischief with compensatory dilatation and hypertrophy, the patients living active and useful lives over many years. Some are able to withstand the demands of acute illness. In all of these cases, the secret of their longevity is found in the integrity of the myocardium, together with due observance of care in all matters of hygiene.

Of late years, increasing attention has been paid to the study of chronic myocarditis. Clinically and pathologically, our knowledge concerning the same may be said to be in its infancy. Mackenzie in his most valuable work on Diseases of

the Heart, remarks in effect that he has presented the hearts of patients exhibiting the most varied groups of symptoms and clinical histories to pathologists and has received in reply reports remarkable for their sameness. The cases which we have seen fit to denominate myocarditis certainly do present remarkable clinical dissimilarities. Time will advance knowledge to such an extent that we will be able to attach to each clinical group, its proper anatomical and pathological origin. Notwithstanding the great strides of pathology we must admit that in many instances disturbance of function is surer evidence of disease than macro- and microscopic tissue changes. Some cases chronic myocarditis cannot be explained with certainty by any facts at present at our disposal. We can make guesses, but not positive assertions. Take for example the case of Mrs. L., aged 60 years, of decidedly gouty history. One day while on the street she was seized with oppression over the præcordia, and immediately returned home. Her only symptoms were a knowledge that she had a heart, and sensations of præcordial distress, palpitation and arrhythmia. I saw her almost immediately, and found an irregularly acting heart with very weak impulse. This condition continued for about a week, gradually improving until she resumed her usual good health. This was six years ago. The patient was not a neurotic subject and there has been no return. At the time of the attack, I gave an unfavorable prognosis, and advised a prolonged rest treatment. This advice was not followed. The patient remained well, and has had no recurrence.

Theories concerning the pathology of this case cannot be substantiated. It has always seemed to me that the attack of cardiac weakness originated in a thrombosis of a small branch of a coronary artery producing temporary embarrassment of the cardiac muscle.

More strange is the case of Mr. F. D., aged 73 years. For the two years he had been my patient, he suffered from shortness of breath on walking. He was markedly emphysematous, and had had for months a blood pressure of 300 mm. or thereabouts. His urinary examination was negative. One day he was suddenly seized with rapid cardiac action (pulse 140) and some præcordial distress. The following day his heart exhibited great irregularity. He was ordered to bed and continued there for three months. This was five years ago. The irregularity of the heart has continued to this time. Since the

time of the above described attack, the blood pressure has been 150 mm. or thereabouts. The shortness of breath remained absent, but the remarkable arrhythmia continued. Three weeks ago, he had a mild aggravation of his cardiac inadequacy, from which he has made a good recovery; but now his pulse is slow (60 per minute instead of 80 to 90 as heretofore).

Reference to blood pressure in connection with the above case leads me to digress from my main subject to speak of two points in relation to the use of the sphygmomanometer. Observations made in two cases of aortic regurgitation showed marked differences between the systolic and diastolic pressure, an observation which is recorded in modern text books on medicine. In both, the oscillations of the mercury in the tube amounted to 30 millimeters. This, of course, is the instrumental expression of the well known symptoms of aortic regurgitation, namely capillary pulsation and the water hammer pulse.

We are too prone to single out high blood pressure as a symptom requiring special therapeutic attention. Last summer, I was summoned to see a patient who had been taken with a paralytic seizure. Her urine gave all the signs of an interstitial nephritis. Her blood pressure varied from 180 to 220 mm. She improved considerably in her condition, so that ultimately she was able to walk; the paralysis of the arm remained permanent. Attempts were made to bring the blood pressure to a point more consistent with what was deemed safe in view of her attack of cerebral hæmorrhage. Invariably, and these observations covered a period of four months, any reduction below 170 mm. caused a general feeling of ill-being. On the other hand we can all describe cases in which the artificial reduction of blood pressure has given great relief to symptoms. My case, which is by no means unique, shows that we must not regard reduction of blood pressure as always desirable.

I would also take opportunity of speaking of the blood pressure in connection with arterio-sclerosis. My experience has been that this is either normal or lowered. It is not uncommon to find among one's aged patients numerous symptoms dependent upon the associated arterio-sclerosis, these symptoms including vertigo, headache, constipation, digestive disorders, etc. In several of these persistent cases that have come to me after thorough treatment by others, digitalis administered to

give the organs a better blood supply and to increase blood pressure has been followed by brilliant success. Up to within a comparatively short time I have hesitated to give digitalis in the aged because of the theoretical objection of increasing the strain upon the degenerated blood vessels. Experience has taught me that if used with judgment this fear is groundless; or at least it should not deter us from its administration in view of the great relief given to symptoms which had been making life unbearable.

It is too prevalent a practice to give an unfavorable prognosis in cases of serious organic cardiac lesions. No matter how much such a course may appear to be justified by the clinical facts, it is astonishing to note how frequently we err against the welfare of our patients in formulating a gloomy outlook. There is no organ of the body capable of as much improvement through rest and development of compensation as is the heart. The following cases are good examples of absolutely unfavorable prognosis miscarrying:

Mrs. C., aged 55, had been in the Hahnemann Hospital on two previous occasions for ruptured compensation originating in double mitral disease. On the first admission, she presented the ordinary dyspnoea. On the second she had right sided hydrothorax. On the third, she suffered greatly from dyspnoea and was ascitic. On this occasion, she had a double mitral murmur and tricuspid regurgitation. Her urine decreased to about six ounces daily. Despite treatment and frequent tapings her progress was downwards. After the fifth tapping *without any change in treatment* there was a sudden and continuous improvement. The urine increased in quantity; the ascites did not return; the dyspnoea disappeared. She then left the hospital feeling very comfortable but with her physical signs unchanged. This is probably the most unexpected improvement I have ever seen in any case of heart lesion.

Mr. L., aged 60 years, was brought to the Hahnemann Hospital by patrol, having been seized with præcordial distress and syncope on the street. He gave a history of repeated attacks of like character for two years preceding his admission. Examination showed practically no dilatation; but the heart sounds were of the feeblest possible intensity. His treatment was arsenicum iod. and absolute rest, which was maintained for three months. When he left the hospital, he felt very well. The ultimate prognosis of this case is not to be questioned, for

it is only a question of time when the symptoms will return. The temporary recovery in this case was certainly remarkable. My feelings respecting the outlook in this case may not be justified. One very similar in character was treated by me with prolonged rest and arsenicum iod., six years ago. In the past four years, the patient has considered himself absolutely well.

Mrs. S., aged 60 years, has been a patient in the Hahnemann Hospital eight times during a period of six years. She has a double mitral murmur with aortic regurgitation and well marked hypertrophy and dilatation. Her home is most unhygienic and her labors as a housewife arduous. Her case has been one of great interest for teaching purposes during her various stays in the hospital. The explanation of her recoveries probably lies in the fact that her myocardium is in most excellent condition, and becomes tired under the unnatural conditions of her home life. Hospital residence restores compensation.

Mrs. E., aged 40, had had two operations for breast tumor, the microscopic examination revealing carcinoma. In the summer of 1904, she was seized with hemiplegia which was diagnosed as dependent upon embolism. Recovery was excellent. In the fall of the same year, she developed a septic type of fever, with cardiac murmurs and dilatation. I was called into the case in December, at which time the fever still continued, mounting at times to 104 F. Notwithstanding the seriousness of her symptoms, she had been encouraged to go about under the mistaken diagnosis of hysteria. At this time the pulse was always above 150; heart greatly dilated, and highly irregular, double mitral murmur; tricuspid regurgitation; persistent vomiting; hydrothorax; albuminuria, etc. This condition continued for one month before improvement was manifested. The turning point in her case followed the regular administration of a small dose of morphia each night to allay restlessness. To-day, so far as her feelings are concerned, the patient is well. She has a badly dilated heart. The mitral murmurs continue. The tricuspid regurgitation no longer exists. This is the only case in which I have diagnosed septic endocarditis and seen recovery follow.

That the anginal complexus of symptom is frequently ushered in by gastric phenomena is often admitted in theory. In practice, this point is too apt to be forgotten, if my exper-

ience is any guide. Within the present week, I have had two cases in point. A woman aged 59, having eaten heartily before retiring was seized about 2 a. m. with severe epigastric pain followed by extension to the præcordia. The heart muscle was very weak. It was then learned for the first time that for months she had had epigastric pain and shortness of breath from slight exertion. Suppression of urine, uræmic coma and death followed within 24 hours.

One of my patients, a man of 63 years, has had interstitial nephritis for 10 years. For the past year, he has had epigastric pain and dyspnœa following exertion. These subside promptly after resting. His blood pressure ranges from 150 to 180 mm.

Flatulence probably due to aspiration is a common method of onset, a vicious circle is started.

The great importance of rheumatic fever as a cause of organic heart disease has tended to the neglect of other etiological factors, of which syphilis is by no means the least. Authorities in general recognize that it may be a cause, but all of them seem to look upon it as rare. If my experience is any guide, they are mistaken. The relationship to endocardial changes is best summarized in Allbut's *Practice* (volume V, p. 864) as follows: "Syphilis attacks the myocardium and the endocardium; in the former, it causes endo and periarteritis with tracts of fibrous tissue in the midst of the myocardium, or it may lead to granular deposits. In the latter case, valvular disease may result from arteriosclerosis, of which syphilis is one of the remoter causes; that acute endocarditis is ever due to the syphilitic virus is very doubtful. Chronic endocarditis of syphilitic nature does occur, but is a very rare occurrence."

Allbut himself later in the same volume speaking of lesions of the aortic area says: "Syphilis is probably concerned in the causation of many cases of aortic diseases, though except when it exists in the form of a definite gumma, we have no certain test of the syphilitic process, whether in the living or in the dead body." . . . "For many years I have been wont to infer from the state of the radial artery the effects of syphilis on the vessels of almost every man who has been saturated with this poison; and such surmises have been reinforced by the more direct observations of Dr. Geo. Oliver. We can scarcely suppose that a destructive agency so active as we know it to be in all other arterial regions, should be without ef-

fect in the aortic area of the heart; yet deciding in a particular case that an aortic lesion is syphilitic, we are confined to the inferences which may be drawn from the story of the case or from associated changes elsewhere, which indications may, indeed, bring us to a moral certainty. We know that a comparatively young man of otherwise healthy habit does not suffer from local disease of the aortic area of the heart unless it be in consequence of extraordinary muscular stress, of rheumatism or of syphilis; so that although there may be no direct means of detecting syphilis, yet if muscular stress and rheumatism both be denied, we fall back upon syphilis as we do with some assurance in the case of aortic aneurysm in such a person; the inference, pathologically speaking may not be positive, but is usually justified in practice."

Mackenzie in his admirable work refers only to the relationship of syphilis in the production of cardiac-sclerosis and gummata in heart block.

Krehl presents the best exposition of Syphilis of the Heart (Nothnagel's *Encyclopædia: Diseases of the Heart*, p. 668). The lesions to which the syphilitic poison may give rise include fibrous inflammation and gummata of the pericardium, syphilitic endarteritis, coronary sclerosis, diffuse interstitial myocarditis, gummata and cicatricial, verrucous and gummatous processes in the endocardium. To quote his words as to the difficulties attendant upon the investigation of the subject: "Syphilis of the heart is certainly not frequent. But whether it is as rare a disease as would appear from statistics on the subject seems to us more than doubtful. The diagnostic difficulties are exceedingly great; for so far as I can see, the only condition that is absolutely characteristic of syphilis in a cardiac process is the formation of gummata. As for the remaining forms of endocarditis, myocarditis, pericarditis, as well as arteritis, which unquestionably occur in syphilis, their origin cannot be seen. Hence it is largely a matter of choice on the part of the observer whether and to what extent processes which occur in notorious syphilitics and are not characteristic shall be regarded as syphilitic or not, and statistics in regard to the frequency of syphilitic processes are bound to vary. For the same reason, the diagnosis is equally difficult at the bedside, as Curschmann has so clearly shown."

Clinically we have the therapeutic test, which in many cases will prove positive. But in the true cardio-sclerotic cases it is

very doubtful if the antisyphilitic remedies will prove any more efficient than in the management of similar parasymphilitic processes in other portions of the body. The recent discovery of the Wassermann test and the Noguchi modification places before us a diagnostic measure of no mean importance, which in two cases in my hospital service during the present winter, proved the diagnosis of syphilis in the presence of cardiac disturbance. Unfortunately the still elaborate technique demands a degree of skill which makes the method impracticable in private practice.

As to the influence of secondary syphilis on the heart, the subject has been studied by Fournier, Grassman, Mrazek, and others without giving us any definite data excepting to offer the suggestion that symptoms very much like those of other infectious diseases may result.

The important subject for the clinician is to discover cardiac syphilis at a stage when it is still curable. Unfortunately, my experience has shown that too many of them come under observation when recovery is out of the question. In common with others, I have noted also that sudden death is exceedingly frequent, oftentimes when no disease of the heart has been suspected. One cannot rely upon the history of a venereal sore, for some patients will knowingly deceive, while others have been in entire ignorance of the infection. The symptoms that I have noted in my cases have been those which we have always attributed to the syndrome of angina pectoris, namely præcordial distress, great anxiety, pain and numbness extending down the arms, substernal pain and oppression, paroxysmal dyspnoea, etc. Hence they of themselves cannot be of much value. But when this symptomatic group is observed in a young man in the prime of life,—in a person who has not reached the degenerative period of life,—we are justified in following the law of probabilities, and intelligently guessing—(most diagnosis is but intelligent guessing)—that syphilis is the cause of the illness. A patient seen by me about four years ago exhibited the Stokes-Adams syndrome. He had no assignable cause for the illness. He was but 30 years of age. Potassium iodide was prescribed. Two years later, he was reported to me by his physician as entirely well. Yet this man strenuously denied the possibility of syphilitic infection, and his physician grudgingly put him on the antisyphilitic treatment.

In one of my hospital cases, the cardiac symptoms were as-

sociated with such evident symptoms of cerebral syphilis and a positive Wassermann, that a diagnosis was beyond doubt. This was further confirmed by the therapeutic test.

In another case, the patient was brought into the accident ward by the patrol with anginal symptoms. He was but 36 years of age. Syphilitic history was admitted. The heart muscle was bad. This patient was treated by absolute rest and antisyphilitic medication. Improvement was marked after two months but a cure could not be claimed. The diagnosis in this case was questioned by colleagues on the ground that the patient's habits as to alcohol and tobacco were so bad that syphilis could not be assigned as "the" only cause of the attacks.

In several of my patients, I can recall five at present writing, sudden death resulted without treatment. All were patients about 40 to 45 years of age. In none were post-mortem examinations permitted.

Meagre as is the proof of frequent occurrence of cardiac syphilis, there is sufficient in literature to demand that the subject receive serious consideration on the part of practitioners. Mild cardiac symptoms, however, indefinite or inconclusive should be regarded as danger signals. In several such, I have had symptoms disappear, on treatment. If we wait for positive or unquestionable data, valuable time has been lost.

DIET IN SURGICAL CONDITIONS.

BY

LOUIS RENE KAUFMAN, M. D., NEW YORK.

(Read before stated meeting, Alpha Sigma Association, May, 1910.)

SUCH loose terms as soft diet, liquid and solid diet are responsible for endless variations in the diet of the operative case. In addition to uncertain and varying arrangement in classification we find as well a large variety of ideas as to the nutritive quality, the limitations and the relative advantages of certain food elements.

The same thing applies in surgery as in medicine that our conception of dietetics varies for each one of us. One man starves and waterlogs typhoids, another feeds them liberally,

one gives his laparotomies milk, while another rigidly forbids it. And because of this great variation it is difficult in studying text books to find any but a few general principles of diet. The books have little to say. This little varies considerably for each writer, and I think most of us feel that not enough attention is given to this part of our surgical work on account of the lack of definite study.

In the first place we are all agreed that the diet of the surgical case shall fulfill four requirements:

1st. It must be agreeable to the patient, to avoid disgust, especially in the first few days, which are so full of troubles in feeding.

2nd. It must be concentrated, liquid or soft in character, without residue.

3d. It should avoid constipating or laxative effects, if anything favoring the latter.

4th. It should be sufficient to conserve strength, but not overabundant.

The three types of surgical diet are liquid, soft and solid to which everyone adds a fourth or special diet. But we all include milk as liquid diet, which, when ingested, is no longer a liquid but a curded mass. Yet milk contains such ideal proportions that it is a favorite. Given in small quantities, especially diluted or flavored, it is safe and reasonably well tolerated. I give it when it is desired by the patient, but when it is repugnant I prefer to avoid it. There are substitutes which practically replace it. But for peptonized milk we have no substitutes, which because of its bitter taste is usually agreeable to the milk hater. It has frequently sustained with champagne severe post-operative nauseas for days.

Now as to what foods constitute these three classes is where each man differs, and is to my mind an important proposition in dietetics. This is the scheme of diet, for example, advocated by Dr. Howard Kelly:

For the post-operative period he advocates for the first twenty-four hours half-hour doses of albumin in water or ginger ale or weak beef tea. He uses egg albumen, which he prepares by beating into a thin froth the whites of four eggs, which he lets stand for an hour in a cool place; strain out about two ounces of the liquid and do not use the frothy part. Give this flavored with lemon or sherry in sweetened water.

As the stomach becomes tolerant he gives gruels, beef tea and chicken broth, wine-whey and clam juice or oyster-free hot oyster soup. On the

second day he gives from four to eight, and on the third from ten to fourteen ounces.

These amounts are so much smaller than the usual diet that they serve to call attention to the present tendency to cut down on our diet.

Dr. Kelly begins soft diet on the third to the seventh day. This consists of soft boiled eggs, milk toast, bread, soups, custards, wine or fruit jellies. Sweetbreads and raw oysters mark the transition to solid diet. He gives as his diet lists:

Liquid Food:—

Milk.—Plain, peptonized, malted, with albumin, fruit juices, buttermilk.

Wines.—Grape juice, wine-whey, whiskey.

Broths.—Beef tea, broth, broiled beef juice, chicken broth, oyster, clam.

Soups.—Mock bisque, tomato, rice, asparagus and pea creams, consomme, boullion, chicken soup with rice.

Eggs.—Poached, shirred, soft boiled.

Jellies.—Wine, orange, coffee.

Creams.—Apple float, whipped orange or Spanish, tapioca, rice, baked custard, tapioca with baked apples, arrowroot, blanc mange, orange sherbert, lemon sherbert, junket, panada.

Special Diets:—

Oysters and sweetbreads, creamed, broiled or raw oysters, creamed or broiled sweetbreads.

Beef.—Scraped beef sandwiches.

Birds.—Partridge, squab, chicken stewed with rice.

Porridge.—Wheat flakes, oatmeal and other cereals.

For plastic cases, such as perineums, he advocates a diet consisting of milk, from 1 to 2 ounces every 2 to 3 hours for the first 24 hours, weak tea, hot beef tea, rice soup and koumyss. Nutrient enema may be used consisting of 2 ounces of milk and the yolks of two eggs, with enough water to make four ounces. From the third to seventh day soft diet in plastic casts consisting of soft eggs, sweetbreads, oysters, white chicken, milk toast, rice, bread, mush, baked apples and baked potatoes. Then gradually resume full diet.

I have thus gone into Kelly's diet recommendations in detail, partly because this will afford us a basis for discussion, and partly because I have found no better recommendations in any of my text books. But in the diversity of the diet lists there is much to commend and also much to condemn.

Formerly at the Flower, soft diet included tomatoes, string beans, salads, fried potatoes and other atrocities. I remember a hysterectomy which on the fourth day I put on soft diet; for her dinner she was given among other things tomato salad, fried potatoes and hot biscuits. For the next two days she was a rival of any first-class gas works. The nurse could not have selected a nicer arrangement to produce oxalic acid with its train of symptoms.

Pre-operative diet I shall pass over without mention. But

post-operative diet is what we mean by surgical diet and is of paramount importance. It is regulated, 1st, by the operation, 2nd by the amount of nausea or vomiting, or better by the anesthetic toxemia, and 3rd by such general factors as nephritis, diabetes, etc. I remember a diabetic gangrene whose thigh we amputated at the lower third; he averaged 4% sugar, with acetonuria and true nephritis; he developed an intense ether toxemia and his feeding was exceedingly difficult. In such a case we have useful foods in skimmed peptonized milk by mouth and nutrient enemas or suppositories. I want to recommend that enemas be either peptonized or pancreatinized. Another hard case to diet was one recently seen at the ophthalmic showing a post-scarlatinal nephritis (advanced croupus) with a mastoid condition compelling operation.

What to forbid is as important as what to feed. With few exceptions I always forbid the following: Plain milk, pastry or hot breads, highly seasoned foods of all sorts, fried food in any form, overcooked meats, pork, sausages, veal, tomatoes, all berries, cabbage, onions, ham or preserved meats. I cannot see the purpose of feeding fish, especially in hospitals, where it is rarely of the best quality. Fish is rich in complex chemical substances which easily decompose; the great danger of ptomaines is never counterbalanced by its questionable value in general nutrition.

When shall we change from liquid to soft and from soft to solid food? Except in laparotomies or rectal or mouth operations, our change is regulated by the nausea; if none is present I start on soft diet; if nausea is present I work to get in soft diet as soon as possible, and then, till sure of the wound and patient's condition, keep him on soft diet. In general liquid diet for the first two days in all laparotomies, and then a slow increase to soft, and a gradual change to solid diet by the eighth day. The temperature and pulse as well as the general condition decide. But in all rectal operations I believe we should attempt more than anything else a laxative diet by fruits, non-pulpy vegetables, cereals and the sour milks.

Among a few special personal points I should like to bring out I want to mention a favorite diet containing albumin. This is the whites of two eggs beaten with sugar to a stiff froth, flavored with grape-juice. This is appetizing, well tolerated and concentrated. I also want to commend Kelly's method of preparing egg albumin. I want to warn against the common

habit of the nurse to beat up the raw white of egg in making albumin water for it makes it indigestible.

Another excellent drink which has now and then been useful, consists in adding to a quart of boiling sweetened water 1 ounce cream of tartar and lemon juice; it should be placed in a well stoppered bottle and administered cold. It is refreshing, laxative and may be classed among the so-called anti-rheumatic remedies.

I have found that in the sour milks we have a substitute for milk which contain less danger of contamination with pyogenic and saprophytic bacteria; for the lactic acid group of bacteria is known to neutralize the toxins of the pyogenic bacteria and even to antagonize the bacteria themselves.

In all operations on the mouth and throat I believe we should feed sterilized food and avoid raw foods with the increased risk of bacterial contamination; and sterilized food merely means well boiled foods, like beef broths or sterilized milk.

Among a host of prepared foods I have used and like especially malted milk, sanatogen, and iron-tropon for the albuminous soft foods, and for the liquids, liquid peptonoids and hemaboloids. The latter are valuable as mild stimulants, but all of these foods must be watched, for sometimes they cause tympanites.

To summarize I should therefore conclude that:

- 1st. Surgical dietetics will never be an exact science.
- 2nd. The diet must not be by class, but adapted to the case in hand.
- 3d. Special attention given to details insures a more rapid and a smoother convalescence and obviates the long, tedious dieting after recovery.

MORBUS BASEDOWII.—Chvostek, in the *Wiener kl. Wochenschrift*, No. 6, 1910, commends climatic change and electrical treatment (galvanization of the sympathetic) as the chief treatment; also, mild hydriatic measures.

Drugs (non-homœopathic) are usually of no value, and iodine and thyroid medication are particularly to be avoided. Operation is indicated only when other treatment fails, or, in tracheal stenosis, for cosmetic reasons, or to enable the patient to resume more rapidly his means of earning a livelihood. X-raying must be used with caution, since, under certain conditions, even an ordinary struma may develop the symptoms of Basedow's disease.

EDITORIAL

HOME COMING WEEK AND OTHER MATTERS PERTAINING TO THE HAHNEMANN MEDICAL COLLEGE OF PHILADELPHIA.

UNDER the auspices of the Executive Committee of the Alumni Association and the Faculty of the Hahnemann Medical College a new function was inaugurated at the close of the 1909-10 session, namely the "Home Coming Week." The affair was generously advertised in advance, and as a result so many acceptances were received that the Committees were made pretty active in looking after their guests. Beginning with Monday, May 30, and continuing daily until the afternoon of Wednesday, June 1st, there were arranged numerous laboratory and clinical demonstrations for the instruction and entertainment of the visitors. The enthusiastic reception with which the various teachers were received by their *pro tempore* pupils — and many of them old classmates — pronounced the affair to be a success. The greatest interest was manifested, however, in the subject of materia medica, three lectures on which were delivered by Dr. O. J. Haines.

On the evening of May 31, a smoker was tendered the members of the Alumni Association at the Hotel Walton. This was a most brilliant affair. Good fellowship and College Spirit reigned supreme, while the thoughts uppermost in the minds of all were for the Alma mater. The underlying spirit of loyalty and good will was constantly evident. The "Home week" in the Hahnemann Medical College must become a fixed function.

There is a strong lesson to be derived from this experience. The College has now proven its absolute fitness to give to the homœopathic profession in this and neighboring states, that for which it has been clamoring for years, a post-graduate course in every branch of medicine. It has the clinical material to demonstrate every form of disease, both general and special. It can give surgical, gynecological and obstetrical clinics equal to those of any other teaching institution; it has the laboratories to give every kind of general or special course.

More than this, it has not the right to falter when the call from the profession and its Alumni comes; it is the servant and must obey. The profession is crying for the opportunity to return at intervals to the parent institution to further improve itself and it is the bounden duty of this institution to respect that call. The demand has come; the spirit is in the air. The outlying homœopathic hospitals in this city have felt the call and are throwing open their doors for clinical teachings to the Hahnemann College so that the principles of homœopathy shall be placed upon a firmer basis.

And now comes the announcement of the fixation of the Chair of Homœopathic Materia Medica and Therapeutics in the form of an endowment that shall render permanent the teaching and the preservation of this branch of medicine for the good of humanity. Never before in its history, have the obligations of the Hahnemann Medical College been so great as they are to-day.

At the close of this year came the election of a new dean to the College Faculty. The requirements of this position to-day are great, in view of the changes that the past has and the future is destined to develop. He must be a man of sterling quality, of untiring energy, of strong force in the profession; he must have the spirit that breeds harmony and not antagonism, his love of his profession must be sincere, he must be convinced of the truth of the principle that he represents, he must be mentally alert and above all devoted to the good of the Hahnemann Medical College. Dr. William B. VanLennep has been elected Dean of the Faculty. Through thirty years of professional life, his untiring devotion to the Hahnemann College and Hospital proves the wisdom of this. Great is the place to be filled, but great is the man who will fill it.

**THE CONSTANTINE HERING CHAIR OF HOMŒOPATHIC MATERIA MEDICA
IN THE HAHNEMANN MEDICAL COLLEGE OF PHILADELPHIA.**

At the annual banquet of the Alumni Association of the Hahnemann Medical College of Philadelphia, the Dean-elect gave those present the pleasure of learning that Mr. Walter E. Hering, a son of the greatest student and investigator of materia medica our school has produced, has endowed in the sum of one hundred thousand dollars, the Constantine Her-

ing Chair of Homœopathic Materia Medica and Therapeutics. Since then the Trustees of the Corporation have held a meeting and have formally accepted the endowment. This series of events is of the greatest importance, for it insures for all time to come the teachings of the Homœopathic Materia Medica on a sound basis. It moreover provides that practical steps shall be taken for the pursuit of the enthusiastic original investigation which characterized the labors of the earlier homœopathic physicians.

As a means of perpetuating the memory of the greatest materia medicist of the homœopathic school, nothing could be more fitting, especially as the endowment passes into the care of the institution which Dr. Hering founded, and in which he took an active interest to the end of his long and useful life. Although he was best known as a homœopathic physician, Dr. Hering's activities were by no means confined to medicine. When appointed by the German government to investigate the laws of homœopathy, he had already attained distinction as a man of science. As the result of his investigations, he became converted to homœopathy, and resigned his place on the commission. The rest of his life's history and labors are known so well to every physician that no further remarks are necessary.

The endowment of the Chair of Materia Medica has been a matter uppermost in the mind of Mr. Hering for some time past, so that his action is based upon careful thought and consideration. What greater testimony of regard and affection and high esteem could be demonstrated on the part of a son? What greater service could be rendered a scientific medical institution? Above all what greater service can be rendered humanity?

No greater good can be rendered the cause of humanity than the contribution of substantial endowments of those institutions which prepare young men to go out into the world to combat suffering and diseases. There is no charity as great as that which lightens the burdens of the fellow man, and no compensation so great as the satisfaction which is derived from the knowledge of a duty well performed, especially if for the good of humanity at large. To aid an institution that has fought its way through the battles of antagonism and vicious opposition, to preserve the fundamental truths upon which it was founded, to prove the incontrovertible law upon which it rests, is a great

act of humanity and is beyond comparison in the scope of its utility. The principle of Homœopathy has acted for more than a hundred years as the guiding truth in medicinal therapeutics. It has taught the civilized world the possibilities of a fixed system of medicinal treatment and stands to-day as for years, as the great antagonist of empiricism.

THE THERAPEUTIC VALUE OF WORK,

ONE of the most striking developments of modern medicine has been the tendency to investigate psychology as related to bodily health. It is not surprising that investigations in this direction have revealed the fact that useful physical work is a very potent therapeutic measure in restoring health, especially in disorders of neuropathic origin.

Medical science of the past few decades has been strikingly materialistic in its conceptions of the human body, of disease and of therapeutic methods. Practical physicians, however, have long since realized that such an attitude is not only incorrect, but also unsatisfactory in dealing with the sick. Disregard it though we may, the fact remains that there are innumerable conditions affecting the human organism beyond the reach of the scalpel, of the microscope, of the X-ray, or of any other known method of physical investigation.

The importance of the mind in the production and cure of diseased states can no longer be denied. It is difficult to say just how far this immaterial influence goes, but that it exists and must be considered by the practical physician is a fact which can not be too strongly insisted upon.

It is useless for physicians to continue to evade this subject. Innumerable instances might be cited in which, after the efforts of numerous scientific surgeons and physicians have been exhausted, patients have been restored to health by some simple psychical method that was at once effective and surprising in its results. A single example of a case cited by Dr. Robert S. Carroll will suffice: A young woman of wealthy parentage, reared to a life of enervating ease, and hounded by the apprehensions of an anxious mother with her repeated suggestions of illness, slipped on the wax floor of her home and injured her knee. "It looked tuberculous" and was put into a cast. Later she was taken to the orthopedic specialist, was X-rayed,

and nothing was found. In spite of many months of treatment by means of massage, special nursing and Swedish movements she remained a cripple and unable to walk. Five years later a charlatan (but recently a street car conductor) lifted the head of a rib from a hypothetical compressed nerve plexus, and the patient was restored to complete health.

It seems easy and we wonder why the family physician, the orthopedic specialist, the nurse, or some one of the other scientific attendants did not bring about a similar result months before. We suspect, however, that these learned and scientific individuals did not realize for a moment that the continuation of the abnormal condition was due to psychical rather than to physical causes, and that no amount of manipulation or other local treatment applied to the knee could have produced any curative effect whatever. Had the young woman's circumstances been such that she would have been compelled to earn her daily bread, we doubt whether the injury to the knee would have attracted any more attention than would have been warranted by a slight contusion.

Cases like these emphasize the fact that it is essential for physicians and surgeons to be familiar with modern psychology to the extent that they are able to discriminate between those cases which are purely physical in their nature and demand purely physical treatment, and those which are psychical and demand some form of psycho-therapy for their cure.

The idea that work can have any value as a therapeutic measure must come as a surprise, and probably as an unpleasant surprise, to those who have been accustomed to regard work as the greatest curse imposed upon mankind. Psychologists, as well as biologists, are now thoroughly agreed that a certain amount of physical work in some form or other is absolutely essential to man's well-being. Psychology has shown that the mastery of self acquired through physical work and the moral satisfaction and up-lift incident to useful labor is one of the most potent means of overcoming that morbid self-centeredness which forms the basis of the vast majority of neuropathic conditions. In spite of all that may be said or written to the contrary, the experiences of many centuries has demonstrated to medical men that however beneficial may be the effects of philosophy, of music, or of art, the most potent factor for the development of power and character, and for making man master of himself is *work*.

Broadly speaking, the beneficial effects of work are: (1st) physical, (2nd) psychical. The first is so evident that it is not necessary for us to speak of it further. The bright complexion, the over-flowing energy, and the general good health of the man who has worked properly in agricultural and other open air pursuits is a familiar figure to us all.

The psychical benefit derived from work seems to be two-fold in its character. First, there is the self-mastery which is necessary in order to accomplish that which we set out to do and to overcome the difficulties that arise. Second, there is the feeling of satisfaction and self-confidence which arises in the mind when one has successfully accomplished some useful form of labor. It is particularly in the psychical improvement attendant upon it that useful work differs from ordinary gymnastic exercises. For example, it can readily be understood why a man who has chopped and piled up a winter's supply of wood for use in his home should feel much more satisfaction and self-complacency than the man who has spent a similar amount of time going through some purposeless movements with dumb-bells or in pulling weights up and down on an iron rod. Both entail muscular exercise and both exert a beneficial action in that direction, but the latter is entirely lacking in that mental stimulation which is an essential and valuable part of the former.

In prescribing work for therapeutic purposes it is necessary to take into consideration the environment of the patient, his physical condition and his mental inclinations. It is essential that the work be of such a nature as is agreeable to the patient. Again, it should be some form of work that can be carried out in the open air, and should not entail excessive mental strain. One of the most useful and beneficial forms of work is chopping wood. Landscape gardening, digging with a pick and spade, cutting down trees, carpentering, caring for flowers, raising poultry, and almost all forms of agricultural labor are among the most important forms of useful activity that may be used for therapeutic purposes.

In the practical application of a therapeutic measure of this kind the physician naturally meets with many objections on the part of the patient as well as on the part of the patient's family and friends. Neuropathic individuals come most frequently from the class of people who have been accustomed to mental rather than to physical effort, and a large percentage of them

are from the class to whom comfort and ease are much more familiar than labor and toil. In fact, there is a psychical problem which must be met and overcome in the very beginning of such a course of treatment. If the patient is sufficiently intelligent or sufficiently open in his views to allow his being convinced by rational arguments that he should take up some form of useful physical activity, a great deal has been gained. The fact that his inclinations and prejudices are opposed to such a step is by no means a draw-back, for the harder he struggles to do those things which he is not inclined to do, the stronger the efforts he makes to subdue the tendency to yield to his own material pleasures and comforts, the more decided and valuable will be the results obtained. When he once understands that there is no royal road to health, and that the law which was pronounced in the very beginning of human history, commanding man to earn his living by the sweat of his brow, is as imperative to-day as it was then, he has made a great step toward putting himself in right relations with one of Nature's laws, in the proper understanding and following of which lies the secret of a healthy and useful life.

CRATAEGUS OXYACANTHA has been used for a period extending over two years by Dr. Thos. F. Riley, and he reports as follows: "It has been of decided benefit in a few cases of non-compensatory valvular disease, in which there was an idiosyncrasy to the use of Digitalis. It has no decided diuretic action, nor does it raise blood-pressure to any appreciable extent. Cratægus is essentially a mild cardiac tonic. When the heart is in a weak and irritable condition following grip or in neurasthenia with a marked arrhythmia of the respiratory type, agents of the Digitalis group are almost invariably badly borne. This is often a result of the digestive disturbance they so frequently entail. Here the Cratægus often acts surprisingly well. It is a perfectly safe agent with no poisonous effect. It can do no harm in aortic disease and is worthy of trial in these troublesome cases. In fatty degenerations and in heart lesions with high arterial pressure it should be a useful agent. It is better given during or after meals in doses of from 10 to 30 minims of a good fluid extract or a dram of the tincture. A combination with the Bromides is useful in the irritative condition spoken of above."—Dr. Boericke, *May Century*.

GLEANINGS

CARBONIC ACID CONTENT OF THE BLOOD IN CARDIAC DYSPNEA.—Drs. Porjes and Marcovici consider the content, or tension, of carbonic acid in the pulmonary blood to be the best index of the beneficial effect of pulmonary aeration upon the blood. If, in dyspneic conditions, the carbonic acid tension is found heightened, then the hemic ventilation, or æration, has been insufficient, and some lesion or defect in the ærative process will have to be sought as the cause of the dyspnea. Where cardiac dyspnea is present, the carbonic acid tension of the blood in the lungs (ascertained by Plesch's method) was, as a rule, decreased, and the etiologic factor, therefore, in the dyspnea was not some hindrance to respiration, *e. g.*, paralysis of the lungs, tumefaction of the mucous membrane in some portion of the respiratory tract, etc.), but probably an inadequate supply of oxygen to the respiratory center, due to a retarded circulation. To similar causes, the dyspnea from exertion common to patients with cardiac diseases, is to be referred, for here we see, in contrast to the behavior of normal individuals, that the carbonic acid content is decreased in comparison with that noted when the patient is at rest. In a dyspneic case of emphysema with thoracic paresis, the carbonic acid tension was markedly increased, while one of dyspneic emphysema associated with cardiac insufficiency showed, on the contrary, a diminution of CO₂, so that it is a wise procedure in dyspnea with emphysema present, to determine the possible participation of cardiac components. Investigation may establish the procedure as a functional test for the circulatory apparatus, for, insufficient circulation during a period of bodily exertion apparently causes hyperæration and a lowering of the CO₂ index.—*Muench med. Woch.*, No. 10, 1910.

PHYSICAL PHENOMENA IN DEMENTIA PRÆCOX.—In the *Allg. Zeitschrift f. Psychiatrie*, B. 66, H. 5. Tomaschuy and Meyer accept Kraepelin's concept of dementia præcox, and Tomaschuy emphasizes, as most important, the subjective sensations noted in the morbid syndrome, particularly those where some sort of inner relationship or connection with the psychosis is presumable, and hence, relatively, are of frequent occurrence. He remarks, that, in dementia præcox, the number of subjective sensations and troubles is astonishingly great. Some of these subjective disturbances are, it is true, to be considered only as accidental complications in the psychosis, whilst another, and even greater portion of the subjective sensations such as headache, attacks of vertigo and of cramps, the stupor and confusion of mind are most intimately related to the morbid organic process. At the beginning of the disease, the various subjective disturbances are more frequent; never absent, however, in the later stages, and frequently the renaissance of physical disturbances is related with an aggravation of the psychic phenomena. Subjective sensations, then, are of great significance in dementia præcox and of essential aid in determining the period of time

when the morbid process began as well as in the differentiation of the disease from other morbid syndromes.

Further significance is attached to them in that they afford the material substratum for all sorts of delusions and, in many instances, are interpretive of the demeanor or behavior of the patient, especially of certain stereotypic postures and movements. In the matter of prognosis also, they are helpful, for, the more numerous and persistent they are, the more extensive and profound the morbid process. Finally, the subjective sensations are elucidative of the essential nature of the condition, demonstrating that we are dealing with an organic disturbance conditioned by an auto-intoxication. The physical, or objective, phenomena come under two rubrics: (1) Those pointing to an organic lesion (disturbances of speech; of the facial nerve functions; of motility; of phenomena dependent upon cortical foci; pupillary signs; anomalies of reflex action), and (2) Those of hysteric type, or, indicative of general nervousness. Meyer, among the objective phenomena, found more signs of a morbid excitability of the nervous system (sometimes distinctly hysteric in type) than symptoms indicating an organic cerebral lesion. Possibly the cerebral process which underlies dementia præcox first develops functional aberrations more or less hysteric in character, and, later, educes the organic symptoms.

ETIOLOGY OF NON-GONORRHEIC URETHRITIS.—Of ten cases (males) of urethritis, examination of the urethral secretion showed in three the presence (more or less rapidly disappearing) of Prowazek's corpuscles in both the free initial form and the cell-enclosed form, corpuscles recently considered as the etiologic factors in trachoma and, when inoculated upon the conjunctiva of monkeys, developing positive results. Similar results followed, as recently reported, the employment of the vaginal secretion from another patient. One of these cases had trachoma of the conjunctiva as well as a non-specific urethritis, though the micro-examination showed no endocytic Prowazek's bodies. The hypothesis that the virus causing these forms of urethritis is identical with that of conjunctival trachoma, is becoming more and more probable.—Dr. Linder, *Wien. klin. Woch.*

A NEW TUNING-FORK TEST.—In the *Archiv. f. Ohrenheilk.*, B. 80, H. 3-4, Falta says that, if in otitis media acuta there are pulsating noises present, the tuning-fork, whether *via* air or bone conduction, will be heard in wave-like vibration, the waves corresponding and synchronous with the aural pulse-beat. This phenomenon has a differential, diagnostic value, and is likewise useful as a control for Weber's test, *i. e.*, a vibrating fork being placed upon the vertex or the middle of the forehead, the sound is perceived equally by both ears. The writer also uses the symptom in locating the area for paracentesis, though the existence of the pulsative sounds suffices. In mastoid operation, the phenomenon has selective value in determining the area of incision.

FLUORESCENCE.—In the *Wunch. med. Wochenschrift*, No. 10, 1910, Drs. Schanz and Stockhausen, to determine whether the fluorescence of the ocular lens was an actual fluorescence or merely a rendering visible of the

ultraviolet rays, employed the method of crossed spectra (first applied by Newton) to investigate its fluorescent light. They found that the fluorescence began with the blue rays, was stronger with the violet, and strongest with the ultraviolet, the area of greatest intensity being where the ultraviolet wave-length was about 370-400 MM. That changes in the lens may be caused by fluorescence is not to be denied, and where they cannot be demonstrated, as in many substances, the defect is attributable to our methods of investigation. The dyes, in whose solutions fluorescence is best studied, soon disintegrate from the action of light. That the fluorescence of ophthalmic media potently irritates the retina is shown in experiment-animals by a lively release of iridic and palpebral reflexes. If direct sunlight penetrate the pupil, a veil seems to come over the eyes, which disappears if the solar ray be deprived of its fluorescing components. Direct sunlight in low altitudes retains of the short-wave rays, those developing greater fluorescence in the media of the eye, whilst higher planes retain those irritant to the outer or external surface. In low altitudes it suffices to protect the pupil from direct solar raying, but in the higher, the eye must be spared the short-wave rays irritant to its external structure. Euphos glass serves best here, as shown in Dr. Flemming's use of it at a balloon altitude of 8,000 meters. His eyes were unaffected, while his companion, with dark gray eyeglasses, acquired a severe ophthalmia. Kerosene light is free from the short-wave rays irritant to the outer tissues, those present causing fluorescence in the media only. Protection is obtained by arranging the illumination so that the pupil is always in shadow. With artificial light from any source, the noxious short wave rays are eliminated within a few feet from their source by euphos glass shades or chimneys.

DIET IN KIDNEY DISEASE.—Linossier and Lemoine have observed that albuminous foods of animal origin, given raw, even milk, has a nephrotoxic action. As prolonged contact of the gastric juice usually destroys this injurious effect it is necessary to prepare the albumin in such a way that the gastric juice may well act upon it. Uncooked albumoid foods should therefore never be taken by nephritics, especially rare meats, soft boiled eggs, and raw milk. As the body become accustomed to nephrotoxic action of meat, it is best to prescribe a regular diet in the meat ration of nephritics. The fact that the albuminous food of animal origin produces the same injurious effect in the liver as well as in the kidneys, indicates that the same regime should apply to persons with diseases of the liver as well as with nephritics.—*Presse Medical*.

PATHOLOGY OF NERVOUS DIARRHEA.—Bickel differentiates two forms of this not uncommon disturbance, viz., the psychogenic and the reflex, though the existence of mixed forms is not denied. In both forms, aside from the diarrheic phenomenon, there is nothing objectively morbid demonstrable in the digestive apparatus. In the case of psychogenic diarrhea, the intestinal flux follows some psychic excitement, later to become more and more easily respondent to the slightest mental disturbance. In the reflex form, the diarrhea, at first, succeeds the ingestion of certain fruits or vegetables, after which it returns regularly when these articles of food

are eaten. In this form, the reflexes, particularly the patellar, show increased excitability. In nervous diarrhea, the type or nature of the stimulus is not the essential thing, as it is, for example, in a toxic or nosogenic diarrhea. The morbid factor is the lessening in amount of the excitation required to develop irritability; also, the confusion or disturbance engendered in the transmission of the stimulus. The site of the "disease" is, doubtless, central; whether the sympathetic system be involved, is not known. In treatment, the chief thing to do, is to convince the patient that he is not sick. Roborants and residence in medium altitudes are helpful.—*Muench. m. Woch.*, No. 9, 1910.

ADRENALIN AS ANTIDOTE TO STRYCHNIN.—Januschke, in a repetition of the investigations of Falta and Ivovic, concerning the antidotal qualities of adrenalin in strychnin poisoning, arrived at conclusions contrary to theirs. The condition of strychnin intoxication in frogs was unrelieved, and a mixture of the drugs, applied subcutaneously to guinea pigs, was innocuous, though producing typical intoxication, by the intravenous route. The frog's heart stopped in diastole by strychnin, may be brought again into action by the use of adrenalin, but only because of an irritant effect common to camphor, strophanthin, atropin, or mechanical and electrical stimuli.—*Wien. klin. Woch.*, No. 10, 1910.

"GLASS-BLOWERS CATARACT:." ETIOLOGY.—The characteristic cataract found in men at this trade is, necessarily, related to some peculiarities in their work or their environment. Peters considered a stasis in the vortex veins, when blowing, as the cause. Such hypothesis with difficulty explains why the artisan, for many years, is affected in one eye only, and invariably first in the one nearest the furnace. Leber thought that the vaporizing taking place on conjunctival surfaces, together with the loss of water by sweat throughout the body, thus causing a greater degree of concentration in the humors, was etiologic in clouding the lens. If so, the clouding should begin at the anterior pole, while, as is well known, it always commences at the posterior. Direct injury to the lens might, theoretically, be due to the caloric rays, but, since the iris is an excellent conductive body and, therefore, offers no protection, the fact that the opacity is confined to that portion of the lens unprotected by the iridic membrane, remains unexplained. The visible rays, in so far as they pass through the lens unchanged, cannot be considered etiologic; but, the short-wave rays and, in particulate, the ultraviolet (extremely absorbable by the lens) demand consideration. Cramer, by clinical deduction, arrived at the conclusion that the direct cause of cataract formation in glass-workers was the action, for many years, of the ultraviolet rays. Schanz and Stockhausen, investigating the conditions under which these artisans work, examined the rays from the furnaces spectroscopically, finding them free of the rays which, from electric source, excite a characteristic "electric" ophthalmia, but, well provided with short wave, ultraviolet rays, which are absorbed when they impinge upon the strongly pigmented iridic curtain, but act directly upon the lens in the area not protected by the iris, whence, not only the characteristic cataract, but also the dermal alterations common to the facial skin of glassblowers.—Drs. Schanz and Stockhausen, *Munch. med. Woch.*, No. 10, 1910.

COMMON ERRORS IN THE DIAGNOSIS AND THERAPY OF CYSTITIS.—The symptoms, pyuria, increased desire to urinate, pain on urinating neither singly nor together justify a diagnosis of cystitis. In acute cases their presence indicates a probable cystitis, but in the subacute and chronic, recourse should be had to the cystoscope, which also points out the suitable method of treatment. The drinking of an alkaline water, often prescribed when the urine is already alkaline, is incorrect, and, because of the increased diuresis, may be harmful, e. g., in prostatic patients. Irrigation should be practiced only when the bladder is of good capacity, and then with the strictest aseptic technic. Instead of boric acid solutions, silver nitrate or hydrarg. oxycyanat. (1:1000), pot. permang. or chinosol (1:2000) should be used. Where vesical capacity is small, instillation (first removing residual urine) of the empty bladder is in order. In tuberculosis without mixed infection, silver nitrate is not to be employed for instillation.—Dr. Kapsamer, *Wein. med. Wochenschrift*, No. 6.

ANTHRAX: ITS TREATMENT.—Beyer, in the *Munch. med. Wochenschrift*, 1910, No. 7, cites the cases of two tawers (tanners of white leather), each infected on the right cheek, each subjected to the same treatment. In the first, afebrile case, the *pustula maligna* healed under local compresses of pyocyanase, the patient having received two intravenous injections of Soberheim's (Merck) anthrax serum, the cicatrix being barely visible. The second tawer had fever; on the second day edema of the right eyelid set in, and the infection extended into the palpebral tissues. Intravenous injections, two of 20 cc., one of 10 cc. of the serum were given, and locally, alternation of simple moist, and pyocyanase dressings. On the fourth day, erysipelas began in the area of the primary infection and extended to the chest, the malignant pustule, however, containing anthrax bacilli only. In the smears made, there was gradual diminution of the capsule formation, at first so marked. Even after cessation of the pyocyanase treatment culturable bacilli were present in the pustule, the scabs on cheek and eyelid were extremely slow in falling off, the cicatrix causing great wrinkling of the palpebrum. The upper lid was shortened, the lower, ectopic, and there remained a chronic conjunctivitis with epiphora. The retinal tissue was normal; vision much diminished; astigmatism. Injections of fibrolysin had no effect in stretching the scar tissue, and a plastic operation was indicated. Other authors also emphasize the absolute harm done by any resort to surgical measures in anthrax infection.

WASSERMANN'S REACTION AND THE GENERAL PRACTICIAN.—In the *Muench. med. Wochenschrift*, No. 10, 1910, S. 507, Prof. E. v. Dungern, after a lucid exposition of the principles underlying W. R. in the diagnosis of lues, renders it as easy and reliable in execution by the physician as a urinalysis for albumin, sugar, etc. The W. R., as originally formulated, and as practical in the laboratory, is beyond the technical resources of the general practitioner, and is none too easy of accomplishment for the trained laboratory specialist. The author, however, has had Merck & Co. prepare a set of reagents, already titrated, and costing about 20 cents for each reaction. The extremely delicate titrations, having been thus disposed of,

the manipulation of the reagents becomes simple and rapid of execution, viz.—two test tubes receive 2 cc. each of physiologic saline solution, and to one of them is added a drop of alcoholic organ extract. In each tube is then placed a definite amount of paper (compliment) saturated with guinea pig serum. Blood is then taken from the patient's finger tip (or the lobe of the ear), put into a watch glass, defibrinated with a match, and of this blood 0.5 cc. is added to each of the tubes. The tubes are then thoroughly succussed and allowed to stand for an hour, after which, a definite quantity of immune serum is added to each. The reaction begins to show itself within a few minutes. If the patient's serum be syphilitic, a marked agglutination begins in the test tube containing the organ extract, while the blood corpuscle in the other tube remain in suspension. After a short time, the contents of the control tube go into solution. If the reaction be negative, this also occurs in the other tube. If, on the contrary, the reaction be positive, the fluid in this other tube (containing the organ extract) remains clear, whilst the blood corpuscles, retaining their integrity, sink in compact mass to the bottom of the tube. As a matter of fact, this ready-to-use method is more reliable than that of the laboratory, due to the better quantitative relations of the several components. Thus, in the author's method, there is, comparatively, less serum and more blood employed, and a greater amount of amboceptor. Hence, there is no fear of normal serum giving positive reactions, while by the ordinary (laboratory expert) method, a weakly positive serum may give negative reaction.

CHOLELITHIASIS: DIET.—Kolisch (Vienna), expresses an opinion condemnatory of the cholagogic principle not uncommonly applied in therapy, and considers reports of the passage of gall stones, after internal medication, to be much exaggerated. The greater portion of the cases coming under his observation, demonstrate that a latency, so to speak, of cholelithic activity may be labeled as a "cure," the secondary morbid phenomena alone indicating trouble in the region of the gall-bladder. The principle of cholagogic therapy has been made valid also in dietetics. The writer denies any value to cholagogues in the treatment of cholelithiasis. His dietetic therapy is based upon the following considerations: In the secondary inflammatory and infectious diseases of the gall-bladder, it is wise to remember that liver, intestines, stomach may be implicated, clinical experience teaching that a functional weakness of the liver in particular, may suffice as etiologic factor in these secondary phenomena. This hepatic weakness is possibly congenital (heredity unmistakable) or constitutional (in combination with gout, uratic diathesis) or acquired (pregnancy, typhoid, enteritis). Dietetics, therefore, must spare the liver. The intake of albumin should be moderate, given in small portions, and albumines containing ptomains or rich in extractives are to be avoided. The second organ, the intestine, is frequently the source of disturbance in the biliary tract, and diet should be considered with this in view—no strong stimulants, but careful treatment of a possible catarrhal condition; no drastic agents nor heavy fats. The stomach, also, demands consideration, for, irritation of its walls may be the direct cause of a cholelithic disturbance; hence, easily digested foods, not remaining long in the organ, and, no chemical or thermic stimuli. The author prohibits emphatically the use

of cold beverages. Bodily repose, rest, is essential, and massage, gymnastic exercises, games are not allowed. The course of treatment is protracted, three to twelve months or more, with strict adherence to the rules laid down.—*Muench. med. Woch.*, 1910, No. 8.

SOME POINTS IN THE TREATMENT OF CHOREA IN CHILDREN.—Dr. John Allan, of Edinborough, has presented some interesting facts regarding the treatment of chorea in children in the *Amerian Journal of Medical Sciences*, February, 1910. In his opinion the most important point in the treatment of patients suffering from chorea is rest, and without rest any other treatment would be useless. This applies to all cases whether they be of the acute or chronic type. For the child, this means treatment in bed because in no other way can rest be insured. It is extremely difficult to persuade the parents of the child who has chorea of the mild type, that rest in bed is essential, but it is only thus that a rapid cure can be effected. The length of time a child must be kept in bed varies in each case. In some very mild cases rest in bed for a few days may be sufficient, but afterwards the child must rest on a couch for several hours each day, and violent exercise or excitement must be prohibited. Few cases require treatment in bed longer than five or six weeks, and for an average case three weeks or a month will usually suffice. In all cases, after the child gets up he must take things very easily, and no undue exertion, either physical or mental, should be permitted for some weeks.

Isolation is often required in cases of an acute or semi-acute nature. In a hospital this may be carried out by having screens placed around the cot. In acute cases the child's limbs, especially at the knees and elbows, should be enveloped in cotton wool. The sides of the bed should be padded, and the mattress must be a soft one, so that the patient may do himself no injury when tossing to and fro. In private cases it is rarely possible for the mother to care for a highly strung, excitable child, and a nurse of firm and tactful disposition is necessary. Except in bad cases, it is not necessary to enforce strict isolation.

Diet, in the opinion of some physicians, is an extremely important part of the treatment. It should be nutritious and easily digested and consist chiefly of bread with butter, eggs, fish, chicken, meat, milk, green vegetables and potatoes. Sugar and starchy foods should be reduced to a minimum. Tea, coffee and alcohol should be avoided. It is important that considerable quantities of milk should be taken, and in many instances barley water, corn flour or gruel can be added to it with advantage.

External applications have been recommended by many, and are sometimes of value. The hot pack exerts a beneficial effect in many instances, and its application is often followed by sound and refreshing sleep. The cold spray is generally very useful. For the first few times it is well to employ tepid water, but cold water should be used as soon as possible, and will be found most invigorating. It is necessary to rub the patient with a towel after the spray in order to bring about a good reaction. The application of blisters to the spine and spraying the spine with ether or ethyl-chloride are unnecessary and useless. Massage is of particular value in cases in which there is muscular wasting or a tendency to paralysis.

Allan has had considerable experience with six drugs in the treatment of chorea, namely, Antipyrin, Potassium Bromide, Sodium Salicylate, Chloretone, Arsenic and Acetyl-Salicylic Acid. The first three he considers useless. Chloretone he has used in only two cases, and is doubtful whether it hastened recovery. Wynter, however, speaks of its value in several cases. Arsenic and Acetyl-Salicylic Acid he considers to have a marked effect in shortening the course of the disease and in promoting recovery.

THE DIAGNOSIS OF CANCER OF THE INTESTINES.—Cheney, of San Francisco, states that in considering the case of any chronic digestive disorder cancer can never be left entirely out of count; it is always a possibility in any patient over thirty years of age, and always the most likely explanation in any patient over forty, and can never be eliminated from the calculation until all the evidence has been obtained and carefully weighed.

The stomach is much more frequently the site of cancer than the intestines. Certain portions of the intestines are more subject to malignant disease than others.

Cancer of the Duodenum.—This is a very rare site for malignant disease, but the symptoms produced when the disease does occur in this location are very striking. Like cancer elsewhere in the body, the growth here produces anemia and cachexia, pain, and often a palpable tumor. The pain and tumor are usually located in the upper right quadrant of the abdomen. In addition certain special symptoms arise. The most important of these are pyloric obstruction if the growth is high in the duodenum, progressive and profound jaundice if the growth is lower down. In many instances a growth obstructing the duodenum leads to regurgitation of the bile and pancreatic juices, causing their regurgitation into the stomach and their rejection from that organ by vomiting. There is dilatation of the duodenum and of the stomach with copious vomiting of dark brown material resembling bile. This fluid is found in the fasting stomach in the morning even though the organ has been carefully washed out the night before; and the stools are white and lacking in bile.

Cancer of the Jejunum and Ilium.—According to all observers, cancer is rare in the ileum, and still more rare in the jejunum. The whole of the small intestine seems singularly exempt from the disease as compared with the stomach above and the colon and rectum below. It is fortunate that this is so, for the jejunum and ileum are difficult to investigate and their ailments are hard to diagnose. Cancer in this part of the bowel causes anemia, cachexia, with mal-nutrition, with such localizing symptoms as attacks of colic and alternating constipation and diarrhoea; sometimes hemorrhages, but nothing to point to the small intestine rather than the large as the site of the disease. Even when a tumor is palpable, as it most often is not, we have no positive way of determining its site. In such a discouraging condition of affairs it is a comfort to reflect that cancer in the small intestine below the duodenum is almost never found not only by the clinician, but also by the surgeon and biologist.

Cancer of the Colon.—Beyond the ilio-cecal valve the incidence of cancer rapidly increases, and we come into the presence of a fairly common condition. The most common symptoms found in these cases are increasing constipation, distension and recurring attacks of colic. The attacks of colic are often associated with diarrhœa and profuse discharges which may be bloody. Emaciation and marked failure of nutrition are frequently absent or slight in cancer of the colon, and their absence must not mislead the physician. Pain is usually absent except during the attacks of colic. In fact, before the development of marked mechanical interference with the lumen of the bowel, cancer of the colon gives few symptoms of its presence. Physical examination of the abdomen may or may not reveal the presence of a tumor, but repeated attempts to discover a tumor should be made before a decision is reached that it does not exist. For example, after free purgation with castor oil and fasting for twenty-four hours, or after a hot bath to relax the abdominal walls, a tumor otherwise undiscoverable may be outlined. When a tumor is present it is usually hard and may be regular or irregular in form; smooth or nodular. It is usually sensitive to pressure, and as a rule is more or less mobile. As regards position, it may be found in any part of the abdomen. The X-rays are of little value in the early diagnosis of cancer of the colon; it is only after obstruction has developed that we can demonstrate the point of stricture by the bismuth meal. Even then the interpretation is subject to fallacies, and must only be given special significance when in agreement with clinical deductions.

Cancer of the Rectum.—Malignant growths originating in the sigmoid flexure or below is one of the most insidious diseases with which we ever meet and almost always has advanced beyond the stage of operability before it gives rise to symptoms that lead the patient to seek advice. It does not cause anemia, cachexia or loss of weight until late in its history, and its local manifestations may be altogether overlooked for a long time. The most common local manifestations are those due to obstruction of the bowel from pressure on surrounding parts, and to ulcerations of the growth. Pain in the region of the sacrum and lower back, irritability of the bladder, or pain in the distribution of the sciatic nerve may result from pressure. Chronic diarrhœa or bloody discharges from the rectum are the most prominent manifestations in some cases. The X-rays may be of value in diagnosis of cancer of the rectum, but a careful examination of the rectum by means of the finger and the rectal speculum or sigmoidoscope offer the most accurate means of diagnosis.—*American Journal of Medical Sciences*, February, 1910.

TREATMENT OF DUODENAL ULCER.—Moynihan believes that the treatment of chronic duodenal ulcer should always be surgical. In the first attack medical treatment may be tried. Observations on cases that come to surgeons for operation shows that the ulcers have usually existed a number of years, and the condition of the duodenum is such that its restoration to a normal state is impossible. Gastro-enterostomy is almost always necessary. It is the author's practice to enfold the ulcer in exactly the same manner as if perforation had occurred, thus allowing it to heal more readily.—*London Lancet*.

THE TREATMENT OF EPISTAXIS.—Boyd describes a method of plugging the nares for obstinate bleeding which has resisted the usual means of treatment. The plan he recommends is very simple and requires only strips of clean muslin and a pair of dressing forceps. A piece of dry muslin about six inches square is wrapped around the points of a closed pair of dressing forceps by placing the latter in the center of the square and then folding the muslin around the blades umbrella-fashion. This is then passed through the nares until it impinges on the posterior pharyngeal wall, and the forceps is then withdrawn. The edges of the muslin are now spread out over the face and the hollow cone inside of the nose is plugged with small pieces of cotton wool soaked in any stringent drug. If it is not necessary to plug the post-nasal fossæ the muslin can be pulled very slightly forward after the withdrawal of the forceps so as to clear the posterior wall before the plugs are introduced. This prevents the temporary deafness which is sometimes set up. The method is much simpler and much less unpleasant than the operation of posterior plugging as it is commonly performed.—*Australian Medical Gazette*.

MELÆNA NEONATRIUM.—Vassmer has studied 67 cases collected from the literature and reports a new case. The name predicates nothing concerning the etiology and represents simply a symptom complex. Under melæna spuria are grouped those cases where the source of the hemorrhage is external to the child as from a maternal sore nipple, premature loosening of the placenta, &c.; while when the bleeding was from within the child, the name melæna vera was applied. The latter may again be qualified as—asalis, traumatica, infectiosa, ulcerosa, &c. Cases in which neither during the child's lifetime nor at autopsy the source of the vomited blood is demonstrable might be denominated melæna vera essentialis or symptomatica. Of the 67 cases collected only two were spurious and were caused by swallowing blood from a rupture of a velamentous placenta and from placenta prævia. In the melæna vera cases in only two was it possible to locate the hemorrhage during life, when it was found in the nose. In 41 cases recovering no etiological facts were demonstrable, and since systemic diseases such as syphilis, sepsis, &c., could be excluded, the cases are probably explainable by a hyperæmia of the gastric mucosa depending upon circulatory changes taking place at birth in the child. Some authors have thought that cerebral injuries during birth induced the stomach condition, but since in only 7 cases the delivery was instrumental, this is unlikely. So also a physiologic catarrh of the newborn has been spoken of, but the comparative rarity of the disease speaks against this cause. Landau suggested as a cause embolism of the gastro-intestinal canal from thrombosis of the veins of the cord, but that there is no purely local cause is shown by autopsy which reveals all transitional stages from hyperæmia, hemorrhage inhibition, peptic erosion up to deep ulcer. Among the lesions found in fatal cases may be mentioned congenital defects of the heart, of the intestines; duodenal stenosis; angioma of the mesentery; ulcerative processes in the stomach, œsophagus, ileum and duodenum. In the duodenum the ulceration was particularly deep.

In two cases particular mention is made that there was no embolism and in three others the authors ascribed an intra uterine origin on account of the deposit of blood pigment at the base of the ulcer, and the pronounced development of connective tissue around it. In a few cases the cause was bacterial infection, but that this is not frequent is indicated by the absence of elevated temperature and the good health of the mother. Intestinal invagination was found in one case. Regarding symptoms the vomiting of blood occurred from the first to the fourth day, the average being on the second day. The average mortality was 32%. Several therapeutic measures were used in the treatment of these 67 cases; but it is interesting to note that in the cases treated by gelatine injections, the mortality was 8.8%; in those not so treated the mortality was 61%. This treatment was applied mostly by using 10cc. of a one or two per cent. gelatine solution, repeated two or four times daily.—*Arch. f. Gyn.* Vol. 89, 275.

THEODORE J. GRAMM, M. D.

POST PARTUM HEMORRHAGE.—In a brief article on this subject, Stewart, (New York) displays a keen appreciation of its realities. Of much that is said about this accident, he makes this notable comment: "A listener who has managed just one first-class hemorrhage of this sort, and who knows, and who knows that he knows, how deep the accompanying shock is, will have conveyed to his ear that peculiar impression of words, combined with his mental concept, that the speaker never saw a genuine instance of post partum hemorrhage in his whole life." Treatment begins with precaution, he says, and mentions the use of a cupping glass to each breast, or the child or another child applied to the breast in cases that show the slightest signs of exhaustion or of uterine inertia after protracted labor. The Crede method and bandaging the abdomen are of course mentioned. A practical suggestion is that a pulse rate under 105 evincing a tendency to fall means that the uterus will care for itself. On the contrary a rate of 105 or over, maintained for ten minutes is the largest kind of a danger signal. His deductions are: The term post partum hemorrhage should be applied solely to a flow of blood after delivery, 1000 cc. or more in amount, which blanches the lips, produces air hunger, and which gives rise to the pulse symptoms of severe hemorrhage. Other bleedings occurring under similar circumstances are properly named excess bleeding, threatened post partum or traumatic hemorrhage as the case may be. A good precaution is to allow the mother forty-five minutes rest after the delivery of the child. A hemorrhage occurring some hours after delivery may be checked by the administration of an ounce of vinegar by the mouth. If this fails, a hypodermic injection of the same into the uterine wall is an efficient means of meeting the emergency. A Rose bandage will hold the patient safe, after bleeding has been checked. Threatened or actual hemorrhage at the immediate completion of labor may be forestalled or checked by the application of chloroform to the interior of the uterus. The writer desires to add to other more or less valuable means these two simple remedies which have served him well.—*Amer. Jr. Obs.* Vol. 61, 80.

THEODORE J. GRAMM, M. D.

CAESARIAN SECTION, ABDOMINAL AND VAGINAL COMPARED AND CONTRASTED.—Porter (Fort Wayne) concludes that with a living and viable child the abdominal operation should be the operation of choice except in women with relatively large pelves and vaginae. This exception does not apply in placenta prævia. It is extremely doubtful if vaginal Cæsarian section is ever indicated in placenta prævia. The vaginal operation should be the operation of choice in cases in which a quick delivery is necessary and the only obstacle to delivery is an undilated os. In many multiparae for instance, the vaginal operation is to be preferred. The presence of infection in a given case should not decide us in favor of either operation, but the fact that its existence adds to the mortality of both, should admonish us that neither are to be regarded as operations of *dernier ressort*. With a dead or dying mother, and a living, viable child, the abdominal operation should be done.—*Amer. Jr. Obs.* Vol. 61, 71.

THEODORE J. GRAMM, M. D.

THE PRE-OPERATIVE PURGE.—Walker, Evansville, Ind. The time was when but few others than homœopathic physicians preached against the frequent use of cathartics. Later some clear-sighted clinicians raised their voices against the practice, and now many physicians realize the harm done by the habitual cathartic. Walker says practically every house has its ever ready laxative, and ill advisedly (?) adds that this state of affairs is due to the teachings and practice of the medical profession. Does not the family physician inaugurate every treatment with a cathartic? Even the surgeon, who professes scant faith in drugs, purges every patient before a surgical operation, no matter how simple. The author enlarges upon the thought and then records that for the past five years he has noted the results of habitual purgatives and the results of correction of habits and diet, and says it is astonishing how few are not promptly relieved by these simple methods. His conclusions are that purgatives can do harm and should be given only when indications are clear. The profession should abandon the slipshod, routine methods now in vogue and should teach the laity, both by precept and example, the evils of the purgative habit. The practice of purging all patients before surgical operations is unnecessary and injurious; they are made more uncomfortable, are weakened and the condition of the intestinal canal is not rendered more favorable but, on the contrary, germ activity is stimulated just as it is in enteritis, increasing the probability of infection when the gut is opened, and there is in addition to this more post-operative tympany. A diet of digestible food for twenty-four hours or more and a fast of eight or twelve hours before, puts the intestines in the best possible condition for any operation, especially on the intestinal canal, except where obstructive lesions exist, and for these purgatives are worse than useless, and other measures are required. In a few cases of milder fecal stasis a purgative several days before operation, followed by enemas are of service; these are, however, extremely rare. The routine use of any powerful drug is to be deplored, and the habitual preoperative purge is indefensible.—*Amer. Jr. Obs.* Vol. 61, 63.

THEODORE J. GRAMM, M. D.

FOREIGN LITERATURE

 CONDUCTED BY E. FORNIAS, M. D.

HOW I TEACH HOMŒOPATHY.—By Dr. Wassily, of Kiel. In a limited manner the author presents a scheme favorable for those having in contemplation the study of homœopathy, declaring, at the same time, that there are no specifics in homœopathic treatment. "We do not treat the name of the disease, but the patient with his individuality, and we accomplish this by the aid of remedies covering the totality of both, objective and subjective symptoms, and this explains why a given remedy can cure in one subject pleurisy and in another diarrhœa, or acute rheumatism." "Equally important is a profound knowledge of *materia medica*, obtained from books and clinical observation, without considering pathological anatomy the point of departure necessary for intervention."

"A single remedy should be given at a time, and according to the continued, or interrupted effects, followed by a suitable complementary, taking always into consideration the epidemic genius and the generality of symptoms, as well as of the etiological causes."

Therefore, a cold due to a dry wind, demands *Aconite*, or *Nux vom.*; due to dampness or water, *Rhus tox.*, or *Calc. carb.*; a fall or shock indicates *Arnica*; the loss of fluids, *China*; fear or fright, calls for *Opium*; terror with anger, for *Aconite*; a fit of passion, for *Nux vom.*; sadness and grief, for *Ignatia* or *Phos. acid.*; irritable state, for *Staphysagria*; jealousy, for *Hyoscyamus* or *Lachesis*; spleen, for *Capsicum*; sudden joy, *Coffea*; after great physical efforts, *Arsenicum*; articular fatigue, *Rhus tox.*; mental exertion or night watch, *Nux vom.*; sexual abuse, *Phos. acid.*, or *Conium*.

We know the types of chronic diseases for *Sulph.*, *Lachesis*, *Phosphorus* and *Arsenicum*. He insists about the action of remedies in different regions and in the different periods of the day and year, and gives us a condensed pathogenesis of our leading remedies:

ACONITUM:

1. Acts principally on the arterial system.
2. Indicated at the onset of all fevers of sthenic type, with heat, dryness of the skin, and chills.
3. Pulse and heart-beating, full and hard.
4. Restlessness and anguish.
5. Violent thirst for cold drinks.
6. Difficult emission of urine.
7. Numbness and tingling in the left arm, in diseases of the heart.
8. Aggravation in the evening and at night.
9. After colds from dry, chilly winds, or the ill effects of anger with anguish and fright.
10. For vigorous, full-blooded individuals.

ARSENICUM:—

1. Acts chiefly on the respiratory organs, the nervous system; the skin, and the mucous membranes with tendance to exfoliation.
2. Burning pains everywhere.
3. Great anguish and agitation.
4. Extreme thirst, craving for small quantities of water at frequent intervals.
5. Rapid sinking of the forces.
6. Periodicity of the symptoms.
7. Ill effects of animal substances, especially morbid, in the lungs and blood. (*Belladonna*.)
8. Weakness and prostration after the least exertion.
9. Malignity of the symptoms.
10. Asthma, anguish coming from the heart.
11. Pains of cancer.
12. Need of having the head raised in bed.
13. Aggravation after midnight, and from cold, especially while at rest, on commencing to sleep, and in a closed place.
14. Amelioration by dry external heat.

BELLADONNA:

1. Chiefly affects the venous system, hence the remedy for passive inflammations.
2. It is a remedy for the head and for spasms.
3. Blood congestion with redness, erysipelas and heat. Apoplexy.
4. Dilated pupils, photophobia, violent injection of eyes.
5. Painful points, sensitive to least pressure; a strong pressure is tolerated.
6. Dryness of the throat.
7. Scarlet fever.
8. Enuresis of children.
9. Acts principally on the right side.
10. Pains appear and disappear suddenly.
11. Aggravation from 3 to 4 in the morning, during full moon, by deglutition, in a current of air.
12. Suits obese individuals, with black hair.

BRYONIA:

1. Acts upon the serous membranes, the liver and the respiratory system. It is an articular remedy.
2. Lancinating pains.
3. Aggravation by motion, by lying on painless parts.
4. Extreme thirst, takes large draughts everytime he drinks.
5. Dry cough, worse from deep inspirations and after suppressed eruptions.
6. Inflammatory swelling of the joints, or rather pale tissues.
7. Sleeps lying on the back.
8. Desires beer.
9. Uneasiness, headache, diarrhœa during hot weather.
10. Amelioration from damp, cloudy weather.

CALCAREA CARB. :

1. Rachitic and leucophlegmatic patients with light hair.
2. All bone diseases and gouty constitution.
3. Polypoid growths.
4. Abundant perspiration on the head.
5. Abdominal distention.
6. Pains principally like cramps.
7. Anticipated and profuse menstruation.
8. Painless adenitis.
9. Dermatoses worse from cold washing.
10. General aggravation from dampness, while fasting and on raising the limbs.
11. Complementary to Belladonna.

CANTHARIDES :

1. Acts especially on the urinary tract and all its diseases, with the greatest degree of irritation.
2. Burning pains.
3. Amelioration from heat and rest.
4. Aggravation from walking out of doors, and the absorption of cold water.

CARBO VEGETABILIS :

1. Special action on the stomach and bowels.
2. Exhaustion, debility and depression of the pulse.
3. Burning pains, especially in ulcers.
4. Flatulence, gastric dilatation.
5. Bad taste in the mouth.
6. Putrid, hot and moist gases.
7. Hemorrhoids, with constipation, exterior bleeding, tumours, after stool.
8. Supports badly fatty food.
9. Ill effects from spoiled vegetables.
10. Desires salty food.
11. Hoarseness, especially from dampness and night air; moist rales.
12. Whooping cough, at the onset and at the end.
13. Dislikes motion.
14. Useful remedy for the aged.

CHINA :

1. General debility after the loss of fluids.
2. Intermittance of diseases.
3. Pains in the spleen. Biliary calculi.
4. Meteorism.
5. Craves dainties.
6. Complementary of Ferrum.

COLOCYNTHIS :

1. Acts especially on the intestines and indicated in neuralgias.
2. Violent colics and contractions.
3. Intestinal cramps from anger.
4. A pressive, squeezing headache in the sinciput, worse while stooping, or lying on the back.

5. Prosopalgia or facial pains, as well as affected hip.
6. Predominance of nervous symptoms in inflammations.
7. Painful contractions of the face.
8. Amelioration from motion, heat of bed, and coffee.

HEPAR SULPH. CALC.:

1. Adapted to scrofulous, lymphatic subjects, predisposed to moist eruptions.
2. Ulcers and suppurations of all kinds.
3. Susceptible to unhealthy skin.
4. Mercurialism.
5. Specks and suppuration of the cornea, worse from cold applications.
6. Dark complected individuals with moist cough.
7. Persistent hoarseness.
8. Sensibility to touch and to cold air.
9. Insensibility in chronic diseases, and sometimes great sensibility.
10. Aggravation from dry weather; cold bearing on a particular point, and in the interior of the cranium.
11. Complementary to *Calc. carb.*, and *Belladonna*.

KALI CARBONICUM:

1. Acts upon the blood, heart and mucous membranes.
2. Great debility and pain in the sacrum.
3. Dryness of the throat without particular thirst.
4. Dilatation of the inferior palpebral bag.(?)
5. Stitching pains.
6. Hard, very variable pulse.
7. Difficult first menses, or superabundant with bright blood.
8. Hemorrhoids, especially with kidney trouble.
9. Most all pains reappear between two and four A. M.
10. Complements: *Phosphorus* and *Carbo. veg.*

LYCOPODIUM:

1. Acts particularly on the bladder, and the digestive and respiratory organs.
2. Troublesome production of flatus, inodorous.
3. Red sand sediment in the urine, and uric acid.
4. Pulmonary pains with moist rales and fan-like motion of the alæ-nasi.
5. One foot cold, the other warm.
6. Sensibility to open air, and to cold.
7. Vascular tumors.
8. Pulse, accelerated after meals and in the evening.
9. Pains travel from right to left.
10. All maladies are worse from 4 to 8 P. M., and from satiety.
11. Amelioration from eructations, and in bed.
12. Complementary of *Lachesis*.

MERCURIUS SOL:

1. Principal remedy for diseases of the genital organs; and for jaundice.
2. Perspiration which does not afford relief.

3. Offensive breath.
4. Otolgia (otorrhœa), with secretion of bloody pus and weakness of hearing; inflammation of the auditory canal, with formation of abscess.
5. Abscess and ulcers of the mouth, tongue and gums.
6. Sore throat, with inflamed tonsils, circumscribed redness, and profuse salivation.
7. Painful stools with slimy secretion.
8. Ineffectual urging to stool.
9. Superficial ulcers.
10. Sensibility to cold air.
11. Aggravation at night, from heat of bed, on opening the mouth. Cold increases all pains.
12. Longing for bread and butter.

NATRUM MUR.:

1. Acts upon the mucous membranes, the stomach, the intestine; the epidermis, and is suitable to anæmic subjects.
2. Irritable mood; sensitive to reproaches.
3. Sleepiness during the day, chilliness and desire to uncover during the heat.
4. Beating of the heart with very variable symptoms.
5. Pulse and palpitations of the heart intermit.
6. Backache, needs strong support.
7. Constipation with gastric pains.
8. Feeling of a hair on the tongue.
9. Scattered pains; malaria.
10. Red sediment in the urine.
11. Aversion to bread.
12. Aggravation from 9 to 11 A. M., and from manual labor.
13. Amelioration while resting, fasting and warm weather.
14. Complementary to *Sepia*.

NITRIC ACID:

1. Acts upon the muous membranes, the epidermis, the glands and the bones.
2. Combats mercurialism.
3. Syphilitic ulceration of the nose, mouth, glands, bones, &c., &c.
4. Malignant sore throat, with sensation of foreign body.
5. Pains in the prostate.
6. Tubercular pulmonary suppuration with lancinating pains.
7. Nosebleed, with clots, especially in the morning.
8. All secretions smell bad, principally the urine.
9. Chilblain.
10. Diplopia and myopia.
11. General debility; better from riding in a carriage.
12. Aggravation from cold and the open air.
13. Suited to lean persons with dark complexion.

NUX VOMICA:

1. Acts upon the digestive organs; spine and ganglionar systems.
2. Irritable mood; rigidity and contractions.
3. Ailments from excessive mental exertions and night watches.

4. Anorexia with bitter, acid mouth.
5. Gastric pains radiating in all directions, and in the back; easy vomiting.
6. Distention of the abdomen and pain in the back.
7. Constipation with incomplete defecation.
8. Enlargement of the liver, especially in drunkards.
9. Painful hemorrhoids with pain in the sacrum.
10. Menses too early and too profuse.
11. Aversion to coffee, tobacco and water.
12. Aggravation in the morning, after eating, in dry cold air, and at the least contact.
13. Amelioration from rest and heat.
14. Suitable to sedentary, muscular, sanguineous individuals, abuses of spirituous liquors.

PHOSPHORUS:

1. Acts upon most organs, especially the arteries, the bones, and the lungs. Tendency to disintegration.
2. Fatty degeneration of tissues.
3. Softening of the brain and spinal cord, with trembling, burning hands.
4. Nervous vertigo.
5. Bleeding polypi.
6. Caries, exostoses, and necrosis of bones.
7. Gastric ulcer with desire for cold drinks, as soon as he vomits, he drinks.
8. Constipation with long, soft stools, or without painful stools, the stools are black, or light gray.
9. Sensation of weight on the chest.
10. Paroxysmal cough, with irritation of the throat, hoarseness and painfulness of the larynx on pressure.
11. Pulmonary tuberculosis with stitches and burning.
12. Sweats, especially when commencing to sleep. Sleepiness.
13. Tendency to hemorrhages.
14. Clairvoyance and somnambulism.
15. Bright's disease with visual troubles.
16. Retinal troubles following diseases of sexual organs.
17. Better from magnetism.
18. Worse while lying on left side, or from changes of weather.
19. Nervous debility of phthisical subjects.

PULSATILLA:

1. Acts especially on the mucous membranes, stomach, respiratory tract, female sexual organs, urinary organs, skin, joints, venous system, eyes and ears.
2. Anemia with chilliness and pallor.
3. Varices and phlebitis.
4. Diarrhœa of variable aspect, above all frothy.
5. Subjects of a tearful disposition, cheerless and mild, easily consoled.
6. All mucous excretions are greenish-yellow, non-corrosive.

7. Adipsia.
8. Fatty food, fruits, cakes and eggs are poorly digested. Nausea.
9. Orchitis with gonorrhœal discharge.
10. Menses too late, too scanty, painful, and arrested.
11. Drowsiness in the day time.
12. The patient lies on the back, the arms above the head.
13. Useful remedy for the abuse of iron in anæmia.
14. Better in the open air, by moderate motion, from cold, and on rising.
15. Worse in the evening, after meals, from rest, in a warm room.
16. Complementaries: *Sulphur*, and *Lycopod*.

RHUS TOX.:

1. Acts upon fibrous tissues and tendons, cellular tissue and the skin.
2. Useful in luxations and violent twitchings.
3. Results from damp, cold weather.
4. Erysipelas, typhoid fever, predisposed to cramps in the legs, lumbago.
5. Numbness, creeping in the limbs. Moist eczema.
6. Amelioration from external heat and from motion.
7. Aggravation during rest, and on beginning to move; from damp, cold air, from uncovering.
8. Eruptions alternating with dysenteric stools.
9. Complementary of *Bryonia*.

SEPIA:

1. Acts principally on the venous circulation of the female, on the skin, serous membranes, and nervous system.
2. Women or subjects with black hair, restless mood, and yellow or yellow-greenish skin; perspiring easily at the genital parts, at the armpit, and at the back.
3. Unpleasant and touchy irritability.
4. Flushes of heat, especially during the menopause; migraine and chronic headache.
5. Fatigue and debility in the morning; gets better during the day from violent exercise.
6. Hands hot, feet cold. Portal congestion.
7. Ptosis with menstrual difficulties.
8. Constipation with ineffectual urging in pregnant women.
9. Red sediment in the urine with frequent desire to urinate.
10. Sensation of abdominal relaxation, uterine displacements, she has to cross the limbs.
11. Better from cold air, cold drinks and dancing.
12. Worse from storms, confined air, and new and full moon.
13. Complementary of *Natrum mur*.

SILICEA:

1. Acts upon the bones and glandular tumors.
2. Suppurations and fistulas of all sorts, especially germinating.
3. Feeling of a hair in the throat.
4. Cataract, especially after the suppression of sweat.
5. Violent headache, commencing at the back of the neck, extending

to the cranium and brain, sometimes with nausea and blindness. Frequently a profuse urination relieves the headache.

6. Fetid sweat of feet, ulceration of the toes, and ill effects from suppressed sweats.

7. Over-excitation of the nervous system in the torpid states of tissues (tabes).

8. Aggravation from noise and light, from change of weather, cold, uncovering and during full moon.

9. Amelioration from being wrapped up warmly.

10. Complementary of *Thuja*.

SPIGELIA :

1. Act on the heart, the sensitive nerves and the eyes.

2. Prosopalgia with violent stitches, lacrymation, redness of the sclerotic.

3. Inflammation of the heart with intermittent irregular pulse.

4. Intestinal worms with fetid breath.

SULPHUR :

1. Acts upon the skin, the mucous membranes, and the venous system.

2. Important remedy of scrofula and glandular affections.

3. Serves to rouse the reactive power of the organism.

4. Impurity of humors.

5. Children with very red ears.

6. Eruptions, especially dry and pruriginous, worse from scratching.

7. Heat, wishes to uncover himself.

8. Little tendency to sweat.

9. Morning diarrhœa, driving patient out of bed; followed by constipation.

10. Prophylactic of cholera.

11. Tendency to ulceration of folds of the skin.

12. Suppressed hemorrhoids.

13. Abundant urination after violent urgency.

14. Heat in the cranium, burning in the soles of feet, and weakness of the stomach at 11 A. M.

15. Aversion to meat, drinks much, eats little.

16. Aggravation from rest, the bed, and while standing.

17. Amelioration in the open air and from the heat of the stove.

18. Light complexion, excitable patients, who walk stooping; little inclined to wash, or who exhibit red lips and redness in other mucous orifices.

19. *Sulphur* is for chronic diseases what *Aconite* is of acute states.

THUJA :

1. Acts upon the genito-urinary organs and the skin.

2. Useful against poisoning and its results.

3. Acute and chronic gonorrhœa and their consequences.

4. Chilliness during micturition.

5. Sweats in the uncovered parts.

6. Hairs split at their extremity and are hard.

7. Sensation of something being alive in the body.

8. Condylomata and warts like cauliflower.

9. Nervous phenomena alternating with or following dermatitis.
10. Complementary: *Silicea* and *Natrum mur.*

VERATRUM ALBUM:

1. Acts upon the mind and disposition, as well as upon digestion, the heart, the blood vessels and the respiratory organs.
2. Great anxiety, as after committing an evil deed. Abscess of the liver.
3. Loss of memory.
4. Cramps and profuse diarrhœa.
5. Whooping cough with debility of the nape, attacks of convulsions; aggravation from the ingestion of cold water; in the spring and summer.
6. State of prostration with coldness of the extremities, pallor of the surfaces of the body and cold sweat.
7. Copious vomiting, often with persistent nausea.
8. Abdominal pains before stool, great weakness after.
9. Cholera with profuse stools, frequent, watery, ejected with violence; palpitations.
10. Chills along the spine with cold sweat on forehead.
11. Appetite for acid fruits.
12. Weakness of the heart after acute diseases.
13. Worse from heat of bed, at night, and from damp weather.
14. Better for hot drinks.

Zeitschrift des Berl. Ver. hom. Aerzte. Dr. Picard, of Nantes.

RODENT ULCER TREATED BY POTASSIUM BICHROMATE.—Dr. Wm. Gemmill (*British Med. Jour.*, Oct. 23, 1909) reports the successful treatment of a typical rodent ulcer by means of potassium bichromate solution. The patient was a woman of 82 who presented an ulcer covering most of the bony skeleton of the nose, with a well-defined "rolled" irregular border, and an ulcerated center showing no granulations. A 10 per cent aqueous solution of the bichromate was painted on the surface of the ulcer night and morning until a marked inflammatory reaction occurred in the surrounding tissues, the ulcer being protected between times by a piece of linen. The bichromate was then stopped and a dressing of boracic ointment applied until the surrounding inflammation was allayed. This treatment was repeated twice, the effect of the bichromate being the production of a sloughing over the whole floor, which extended under the rolled edge of the ulcer. Granulation was promoted, epithelium spread rapidly over the ulcer and cure was complete in three to four months.

STERILIZATION OF THE SKIN BY TINCTURE OF IODINE.—A method of sterilizing the skin is suggested by Dr. Grossich who applies a 10 or 12 per cent. tincture of iodine to the field of operation and to the surrounding skin without any preliminary scrubbing with water. His investigations have shown that the tissues absorb the iodine much more readily when they are dry, and that it penetrates deeply into all the seams, which does not occur with the usual preliminary scrubbing with soap and water. The water softens the epidermal cells and they swell and plug the openings. He relates his experience with this technique, especially in a large number

of cases of open, crushed wounds in laboring men. The parts are shaved dry, and then painted with the tincture of iodine, and a sheet is then laid over the naked patient with a hole over the field of operation—the sheet fastened to the skin with a few small clamps and reaching to the floor all around. After anesthetizing the patient, the field of operation is painted a second time with the tincture of iodine, and the completed suture is swabbed anew with it. He has never seen any by-effects from this technique, not even when a third of the body was painted with the iodine. This technique Grossich believes eliminates all danger of infection from the patient. He applies it only when the wound is still entirely free from signs of inflammation such as redness and swelling. If the tincture of iodine is applied after the parts have been recently scrubbed with soap and water, there is much more danger of suppuration; it is indispensable that the tissues should be dry when the iodine is applied for sterilizing purposes.—*Grossich, Zentralblatt für Chirurgie.*

GONORRHOEA IN THE FEMALE.—In his article, treating gonorrhœa in the female, Whitehouse says that he now largely uses cultures of the lactic acid bacillus. The inhibitory action of this organism upon *Bacillus coli* is well known and apparently it has a similar effect upon the gonococcus. He has employed three preparations, lactobacilline, lactofermin, and lactogen. The first is in tabloid form and prepared from Professor Metchnikoff's original strain. The second also consists of tabloids, while the last named is an emulsion of the bacilli. Although the results with each preparation have been good, he is inclined to place most faith in lactobacilline. When first he began to experiment with these agents, he crushed and made an emulsion of the tabloid with water. This was applied to the cervix and vagina through a Sims speculum, but he thinks that the secretion soon washed away the emulsion without any development of the lactic bacilli in the vagina. His method now, after careful removal of all pus by sponging, is to apply to the diseased surface a twenty-four hours' virulent broth culture of the germs, together with a powdered tabloid and a little lactose. The applications are made every three or four days for a fortnight, and the bacilli then removed by a few days' douching with potassium permanganate solution. Of course, during the active treatment, no vaginal irrigation is employed. The first result noted in many cases is an increase in the amount of discharge. In a week or two it becomes much less purulent, and coincidentally, the granulating area on the cervix heals. In this case, perseverance in the method resulted in complete cessation of discharge, and gonococci could not be found on bacteriological examination. A sufficient number of cases have not been treated to make any too dogmatic statements, but the method is certainly one deserving of further investigation.—*The Practitioner*, April, 1910.

QUANTITATIVE ESTIMATION OF ANTIBODIES IN THE WASSERMANN REACTION.—Zeissler, (*Berliner Klinische Wochenschrift*) distinguishes five degrees of strength of the positive reaction and says that all five strengths may be met with, at least in the serum, in almost all syphilogenous diseases, but that certain diseases usually present the higher, others the lower degrees of strength. In tabes and cerebrospinal syphilis the reaction in

the cerebrospinal fluid when altogether positive, is very weak, in paralysis it is almost always positive and usually much stronger. The higher strengths of reaction generally are to be met with in the spinal fluid only in paralysis. There is a marked parallelism between the average content of antibodies and the frequency of the Wassermann reaction in the individual diseases. Diseases with a high average of antibodies only rarely go along with completely negative reaction. In paralytics the content of anti-bodies may greatly decrease both in the blood and in the spinal fluid. In two tabetics the increase of the antibodies in the blood coincided with the onset of gastric crises which had not previously been present. In rare cases the spinal fluid occasionally seems to contain more antibodies than the serum of the same patient. Finally he urges that we should pay more attention than hitherto to the exact quantitative estimation of the antibodies present.—*N. Y. Med. Journal.*

EXPERIMENTAL STUDY OF LACHESIS.—Dr. Sidorenko, of St. Petersburg, has made some interesting experiments upon dogs and rabbits, which have materially proved the action of our infinitesimal doses.

The animals experimented upon received an injection of five drops of Lachesis 6 mixed with a cubic centimeter of distilled water, while the experiment was controlled by other animals being given a like dose of 70 per cent. Alcohol. The white corpuscles of the blood were counted in both before the injection and after the injection at periods of two (2) minutes, five (5) minutes, fifteen (15) minutes, a half hour, an hour, twenty-four hours and lastly two (2) days.

The reaction, almost the same in both dogs and rabbits, furnishes the following conclusions:

First. The hypoleucocytosis due to Lachesis 6 manifests itself within two (2) to five (5) minutes; it is four (4) times more intense than with the control animals.

Second. After fifteen (15) minutes this hypoleucocytosis is replaced by a distinct hyperleucocytosis.

Third. Generally, the diminution of the quantity of leucocytes caused by Lachesis 6, occurs at first very rapidly; at the end of fifteen (15) minutes, it becomes slower, and attains its maximum at the end of twenty-four (24) hours, being very manifest the second day.

In the control experiments the hypoleucocytosis is almost nil at the commencement; at the end of fifteen (15) minutes hyperleucocytosis is produced, the second day it is absent.

Fourth. Lachesis 6 produces at once a hypoleucocytosis rapid and intense with a consecutive remarkable and very prolonged hyperleucocytosis.

The control animals, on the contrary, showed an insignificant hypoleucocytosis, but, on the other hand, a sharp and very short hyperleucocytosis.

The blood, then, may be considered as giving a most sensitive reaction to infinitesimal irritation. In fact, five (5) trillionths of a drop of Lachesis in five (5) drops of 70 per cent. Alcohol, produced an effect altogether different from that obtained in the control animals.—*Medical Century.*

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ADDRESS DELIVERED AT THE ANNUAL COMMENCEMENT OF THE
HAHNEMANN MEDICAL COLLEGE OF PHILADELPHIA.

BY

J. H. M'CLELLAND, M. D., PITTSBURG, PA.

Mr. President, Trustees and Faculty, and my Young Colleagues, Ladies and Gentlemen:

The brief message I bring you to-day will be in no sense an oration, as your speaker is in no sense an orator. My message, however, is two-fold in character, and the time and the place are auspicious. We are met to witness and take part in a great ceremonial event, nothing less than an important epoch in the lives of a band of earnest, thoughtful young men,—men who have become qualified to go forth for a prolonged battle with an ever aggressive enemy.

They this day throw down the gage of conflict to our common foe, disease, filled with high hopes of victory, and ever recurring victories. Their season of preparation has been devoted to a study of the habits and habitat of this enemy whose every movement betokens methods of unspeakable craftiness and insidious invasion. It matters not that modern science reveals but an army of Lilliputians—a veritable microscopic host, it is all the more formidable because it is beyond our range of vision.

Time was when disease was pursued, as it were, by bloodhounds, and attacked with weapons of fiercest aspect, and bloody purpose. Now, thanks to the prevalence of more accurate knowledge and modern methods,—methods only in vogue, let us say, since the light of modern research and therapeutic

reason, have cast their illuminating rays over the field,—now, I say, the medical warrior employs means that do not destroy the citadel, while destroying the entrenched enemy.

We claim nothing but historic accuracy when we assert that this modern era dates from the moment when Hahnemann, standing in the portal of this supreme epoch, proclaimed a rational system of therapeutics (1796) founded on natural law,—not, let us hasten to say, of man's making,—but law written by the hand of Almighty God.

It is our purpose to call the attention of this intelligent audience to-day to a most brief consideration of the preparation and equipment necessary for the conflict to which these brave champions do here and now consecrate themselves,—and then to address ourselves perhaps more directly, to them and their work.

Let me impress it upon you, my dear non-professional friends, that the acquirement of a medical education is no holiday undertaking,—that the young men starting out on a medical career does not step forth from the halls of learning, his Alma Mater, without months and years of severest preparation.

There is no such thing as a sudden transition from even the well trained college graduate to the perfectly qualified medical man. They do not spring as the famed Minerva full armed, cap-a-pie, from the fore-front of Jove! Not so! The candidate for medical honors is first secured by most careful selection. He must be of a standard, mentally, morally and physically, much above the average. Educationally he is the equal of the college bred man; he is a gentleman to the manner born.

Now he enters upon the real business of preparation for his life work, the process that is to round out that finished product known as a *Doctor of Medicine*.

Four years of constant, enthusiastic application is his allotted portion. He delves into the natural sciences with a fixedness of purpose;—he learns to look at the infinitely minute through the eyes of the *microscope*;—he searches into the composition and quality of structures and secretions, with the analytical touch of the chemist;—he unravels and separates the tissues of the body with the keen blade of the *anatomist*;—he listens to the throb of the living, healthy organism, and patiently balances its vital processes in his *physiological* research, that he may recognize the moan of outraged function in his study of

pathology;—he proves the medicinal value of the herb of the field and the hidden treasures of the earth, and learns how they modify the normal processes of the human body, that he may change morbid conditions to health, in his pursuit of a rational system of *therapeutics*;—he intently studies the mechanism of every component part of the organism that he may lay bare the wonders of modern surgery;—and he gives heed to the profoundest miracle of creation, that he may bring aid and comfort to the *mothers* of our land.

Think you these young men pass through this ordeal without taxing to the uttermost, brain, and brawn and blood? Nay, verily, there are heroes in this advancing army; their mission is to save! The cordial welcome they deserve, I trust they will receive from each community.

And now, my dear young colleagues, you are about to be certified as qualified practitioners of medicine. With opportunities at hand you are assured of a successful career. *Create that opportunity!*

You have had ample training in the science of medicine. You have learned the theories of the various vital processes as the foundation for your *knowledge of disease*. You have absorbed the great fact that disease in the initiative is but *disturbed function*. Any means that will restore function to its *normal* is an authorized measure and method in the practice of your art. For medicine is also an art. It may be only a revised dietary, it may be in directing a change in methods of living or place of living. It may be to conserve life a removal of an offending portion of the *organism*; but, my dear young colleagues, do not for a moment lose sight of the *commanding fact* that there is a scientific basis for the *practice of therapeutics*,—and that you are the custodian of this *stupendous truth*.

It is a trust not to be lightly valued, or carelessly thrust aside for so-called modern discoveries—that may be in real truth, but modern fads.

It is quite possible that the entrancing study of modern pathology has for a time overshadowed the study of applied medicine,—but ever keep before you that the supreme object of your pathological studies is to enable you to intelligently apply the *means of cure*.

I am sorely tempted to linger a brief space in consideration of the great therapeutic truth which *old Hahnemann, our Alma Mater*, so nobly represents.

First of all it stands for the whole science of medicine as revealed by the most modern developments. Then more especially does it stand for the science of therapeutics which has stood the test of friend and foe for over an hundred years.

The researches of modern science have done much to overthrow absurd methods in medicine, but verily they have gone much further;—they have produced a race of medical nihilists;—disbelievers in the healing virtue of medicines at all. This is distinctly unfortunate, for while the administration of drugs is by no means the whole of therapeutic art, it is a *mighty help* in the management of diseased conditions. For if it is true that a few drugs are capable of curing disease, it is most reasonable to conclude, that all drugs may be *useful medicines*, if only they are properly employed.

But not only is this true of drugs but of various other preparations such as toxins and serums as well. For the purpose of comparison permit me to indicate the status of prevalent practice as taught by the present leader of so-called Modern Medicine, Dr. Osler. He says, "A new school has arisen which cares nothing for Homœopathy or Allopathy, but has firm faith in a few good well tried drugs, little or none in the great mass of medicines still in general use"—again he remarks, "He is the best physician who knows the worthlessness of most medicines."

Dr. Billings, recently president of the American Medical Association, remarks, "Drugs, with the exception of quinine in malaria, and mercury in a certain surgical disease, are valueless as cures." Then follows Dr. Cabot, of Harvard Medical School, in an address (to his credit) before the Boston Homœopathic Medical Society, who said, "I doubt if you gentlemen realize how large a proportion of our patients are treated without any drugs at all, and how little faith we have to-day in the curative power of drugs." In fact, the present nihilistic attitude of medicine has been summed up by a member of the dominant school as "Osler's black, hopeless, helpless, therapeutic pessimism."

It seems to me one need go no further to substantiate my first proposition, that the new medicine is announced by its sponsors, is simply nihilism, except as pertains to the two or three drugs mentioned, which I shall show, are used in entire accordance with the principles of homœopathy.

The proofs are overwhelming. Billings, just quoted, might

easily have discovered why these two drugs, which compose his whole materia medica, are so successful.

He might not only find it in every Homœopathic Materia Medica, but in Sidney Ringer's Hand Book on Therapeutics, which states specifically the reason mercury acts so curatively, and it is, that it produces conditions exactly *similar* to the ones it cures.

Why not admit this is true of all medicines and thus have at their command the same wealth of means for the cure of disease, that a kind Providence has placed in our keeping.

Well, then, let us see what principle underlies the major section of the new medicine as practiced to-day with such thrilling enthusiasm by our colleagues of the dominant school, namely, the employment of vaccines or serums.

Let no less an authority than Professor von Behring, of Berlin, answer this momentous question. This fearless savant, this imperial seeker after truth, answers it thus:

"In spite of all scientific speculations and experiments regarding smallpox vaccination, Jenner's discovery remained a stumbling block in medicine till the biochemically thinking Pasteur, devoid of all medical classroom knowledge, traced the origin of this therapeutic block to a principle which cannot be better characterized than by Hahnemann's word, *homœopathic*. Indeed, what else causes the epidemiological immunity in sheep, vaccinated against anthrax, but the influence previously exerted by a virus *similar* in character to that of the fatal anthrax virus? And by what technical term could we more appropriately speak of this influence exerted by a similar virus than by Hahnemann's word homœopathy?" Von Behring, in the same article further says: "I am touching here upon a subject anathematized until recently by medical pedantry; but if I am to present these in historical illumination, dogmatic imprecations must not deter me. They must no more deter me now than they did thirteen years ago when I demonstrated before the Berlin Physiological Society the immunizing action of my tetanus antitoxin in infinitesimal dilution."

These brave admissions, that the new therapy is founded on the law of similars, is matched by the generous words of another brave and gifted man, Dr. Cabot, of Harvard Medical School. He says, in a defense of his own craft: "It has been just to charge our school in the past with the absence of any principal or law of therapeutics, and to contrast the order and

system of homœopathic treatment with the helter skelter, *omnium gatherum* of merely empirical methods. But the contrast is no longer just. Homœopathy has a well-defined law which has been established empirically and is constantly and properly being subjected to re-verification through careful experiments."

But there are other noble men, who dare admit the truth, and I shall quote but one more in this connection. Dr. Amalio Gimeno, Professor of Therapeutics in the Faculty of Medicine in Madrid, and former Minister of Public Instruction, has recently issued the following remarkable statement: "As the author of a treatise on therapeutics that I published twenty-five years ago at Valencia, which became classic in the Spanish Faculties, I deplore sincerely having consecrated several pages to unjust attacks against Hahnemann and his disciples, and I would like to be able to-day, to tear these pages from my book. Modern discoveries, however, will charge themselves with the care of correcting them. It is most proper that we should venerate the grand figure of Hahnemann who discovered that which subsequent events sanctioned." It has truly come to pass that modern discoveries are correcting the unjust estimate of Hahnemann and homœopathy, by proving that modern therapeutics, in so far as they are successful, are founded on the law of similars.

We are here to-day to affirm that the great central truths brought to light by Hahnemann and laboriously developed by him, not as a single discovery, but as a result of years of patient experimentation and inductive reasoning, is a coherent system of medicine founded on natural law.

I mention as a corollary quite necessary to the successful application of our Art, the preparation and proper method of applying drugs.

Hahnemann early found that the administration of crude drugs, when in accordance with the law of similars, was not only ineffective but actually injurious. His experiments and deductions led to the discovery that trituration and dilution greatly increased the medicinal quality of drugs. This generalization has been adopted by his followers, as a rule, but late scientific investigation confirms this also. Our Dean Copeland, of New York, has gone into this subject thoroughly, and although I do not quite agree that the effect of infinitesimal doses upon ultimate cells is chemical, rather than vital, still it

is most interesting to observe the attention given by modern scientists to the wonderful power of infinitesimals. I cannot refrain from quoting Dr. Cabot once more, referring to the use of tuberculin: "The poison of tuberculosis which can produce some of the symptoms of tuberculosis is here applied in small doses for the cure of tuberculosis through the production of immunity, or resisting power in the tissues. Surely, (he says) this is a case of *similia similibus curantur*, as homœopathic writers have pointed out. The use of bacterial vaccines in infectious diseases recently produced by A. E. Wright, is distinctly homœopathic. But the revival of tuberculin therapy within the past ten years, after its abandonment in 1890, illustrates the victory of another homœopathic doctrine within our school. I mean the doctrine of the occasional utility of very minute doses. What does he (Trudeau) use? Not the 10 mg. often employed in the early nineties, not even the 1 mg. or the $\frac{1}{2}$ mg. recommended later. At present he begins his treatment in non-febrile cases with one ten-thousandth of a mg. and in febrile cases with one-hundredth-thousandth of a mg. What fixes this dose? Precisely the homœopathic principle, viz., to produce a definite good effect without any observable ill effects."

Much more to the same purpose from highest authorities could be added, but time forbids. Enough to know that *all modern research reveals and confirms the potency of imponderables*.

We may safely conclude, that as science opens up new vistas to our astonished vision, she reveals new and ever useful additions to our *Armamentarium Medicum*, and further confirmation of Nature's law, the intelligent application which is for the "healing of the nations."

In a desultory way I have touched on the essential principles of Homœopathy, and may have made plain that they are founded on reason, established by all the requirements of scientific assent.

I feel justified, therefore, in the claim that Homœopathy is a system of rational therapeutics; that, in the light of modern research, its cardinal principles have been vindicated, and it has stood the practical test of over a hundred years at the hands of thousands of qualified practitioners, and in the experience of tens of thousands of grateful patients.

I even go further than this: I assert without fear of successful contradiction, that notwithstanding the brilliant array of

medical heroes from Aesculapius down, there has never been presented to the world a single method of medical practice based on scientific formula, until Hahnemann elaborated on a foundation of natural law, this system of rational therapeutics.

I have had no desire to convert this commencement day address into a lecture, for it is altogether probable that my young colleagues, at least, have had an admirable sufficiency of this, but the pressing importance of the subject I would present is of such gravity, that it has seemed to me a justifiable infliction.

I thank this brilliant assembly of our people, for the patient attention they have given, and I will ask permission only for a word in closing to my dear young colleagues. It is only a suggestion or two not altogether medical, as to their further course in life.

Somewhat like the clerical profession, the medical man is set apart by the community as different from the ordinary. His manner of life is under closest observation. Napoleon said to his soldiers, "The eyes of France are upon you." I leave with you this suggestion.

But another suggestion might be, that however much you may devote yourself to the acquirement of that most essential of all medical studies—the *Materia Medica*, I take the liberty of suggesting that as a means of increasing your general knowledge you always have on hand a regular course of reading. Reading makes a broad man. To this one might add the study of a modern language as a very useful employment of spare moments.

And a most delightful by-study, too, would be to further pursue your inquiries into the lives and habits of the flowers of the fields, and the various plants you are to use in the care of the sick. The study of botany will add greatly to the interest of your labors.

Then quite different and perhaps more diverting and elevating would be a passing look into the great science of astronomy, in becoming familiar with the flowers of the sky.

For, as it may chance of a calm Autumn night you are wending your way along, as you doubtless will time and again, perplexed with questions that weigh heavily upon you, you may raise your eyes to heaven's blue front and read the answer in the stars, or perhaps, my young friends, receive the answer from above the stars.

THE CLINICAL APPLICATION OF TUBERCULIN IN THE TREATMENT OF PULMONARY TUBERCULOSIS.

BY

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(A lecture delivered during the "Home Coming" Week at Hahnemann Medical
College, Philadelphia, May, 1910).

To the homœopathic school must be given the credit of having first generally employed the toxic products of the tubercle bacillus as a means of treating pulmonary and glandular tuberculosis. Dr. Swan, of New York, in 1874 triturated the sputum of a tuberculous patient with sugar of milk. This substance he called "Tuberculinum." A few years later Dr. Burnett, a homœopathic practitioner of London, prepared the remedy now known as "Bacillinum" by triturating with sugar of milk a portion of a tubercle removed from the lungs of an infected individual. Both of these substances contained the intra-cellular and extra-cellular toxines of the tubercle bacillus, together with other products of bacterial activity and of tissue disintegration. Not only were these remedies prepared by Drs. Swan and Burnett, but they were widely and extensively employed by homœopathic physicians many years before Koch announced his discovery of what is now known as "Old" tuberculin. It is necessary that these facts should be brought to the minds of medical practitioners in order that the credit for priority of use of tuberculin in the treatment of this disease may be given where it belongs—to the homœopathic school.

After the discovery of the tubercle bacillus by Koch in 1882 the path-way was opened for making a preparation of the toxic products of the tubercle bacillus in a pure state. After considerable experimenting, Koch announced, in 1891, the discovery of his original tuberculin, now known as "Old" tuberculin.

When Koch first published his statements regarding the discovery of the therapeutic possibilities of tuberculin it was hailed as the long-sought-for specific cure for all forms of tuberculosis, except, perhaps, those cases which were in the last stage of the disease. An enthusiastic profession all over the world at

once began to administer this substance in large doses to almost every case of tuberculosis that came under their observation. It is needless to recount the disastrous results that followed this practice, and the keen disappointment that filled the minds of all when it was found that more harm than good had been accomplished. It remained for Virchow and his school to bring to an end the first tuberculin era by their sweeping denunciations of the method of treatment advocated by Koch.

For a number of years treatment by tuberculin was in almost universal disrepute among the medical profession; but about 1901 Goetsch brought forward what he termed the "mild method" of administering tuberculin, and it is due to his work, as well as to that of Carl Spengler, abroad, and to Trudeau, in this country, that the present method of using tuberculin had its origin.

It is now conceded by all that the bad results following the administration of tuberculin according to Koch's method can be traced to two reasons: First, the dosage was too large and too frequently repeated; second, tuberculin was given to practically all cases of tuberculosis, irrespective of the stage or type of the disease. The success of the modern reactionless method of using tuberculin is due to the fact that minute or even infinitesimal doses of the remedy are employed, and its use is restricted carefully to that type of cases which experience has shown it to affect beneficially.

VARIETIES OF TUBERCULIN.

A general knowledge of the various forms of tuberculin and their methods of preparation is essential to a proper understanding of their employment in therapeutics.

Koch's original tuberculin is prepared in the following way: Pure cultures of tubercle bacilli are grown on veal broth. At the end of five or six weeks the culture medium, mixed with glycerine, is passed through a germ-proof filter, and the filtrate concentrated by heat to one-tenth of its original volume. Thus made "Old" tuberculin is a glycerinized extract of the toxins produced by the growth of the tubercle bacillus on veal broth. It contains no bacilli.

Some years later, Denys, believing that the concentration of "Old" tuberculin by heat destroyed some of its therapeutic properties, prepared a form of tuberculin known as "Denys' Bouillon Filtrate" which is widely employed. Its method of

preparation is very similar to that used by Koch in making his original tuberculin, except that the bacilli are grown on bouillon, and after being mixed with glycerine and passed through a germ-proof filter the preparation is ready for use; no heat being employed in its manufacture.

As clinical experience with "Old" tuberculin accumulated, Koch reached the conclusion that more satisfactory results would be obtained by using the unaltered toxins contained in the body of the tubercle bacillus itself instead of the extra-cellular toxins present in "Old" tuberculin. This led him to prepare his "New" tuberculin also known as "Bacillen Emulsion." This substance is made by growing the tubercle bacilli on a solid medium. When a thick growth has taken place the bacilli are scraped off and thoroughly ground in an agate mortar. The ground up mass is then stirred up in normal salt solution and allowed to settle. Fifty per cent. of glycerine is now added, and the preparation is standardized so that each c.c. contains 5 milligrammes of solid residue. "New" tuberculin, therefore, consists of a suspension of ground up bacilli in normal salt solution with sufficient glycerine added to preserve it.

THERAPEUTIC USES OF THE VARIOUS FORMS OF TUBERCULIN.

"Old" tuberculin is universally employed for diagnostic purposes, and has also been very widely used as a therapeutic agent. It is presumed to produce chiefly an immunity to the toxins formed by the tubercle bacilli. "New" tuberculin is employed for therapeutic purposes only. Theoretically, it should produce an anti-bacterial immunity containing as it does the intra-cellular poisons of the bacilli themselves. The general trend of opinion seems to be that in "New" tuberculin we have, theoretically, at least, the most efficient of all tuberculin preparations for therapeutic purposes. "New" tuberculin is somewhat milder in its action than "Old" tuberculin, and seems to have a particular effect in reducing the temperature in febrile cases.

PRINCIPLES UNDERLYING THE TREATMENT OF TUBERCULOSIS BY TUBERCULIN.

It is necessary to emphasize the fact that tuberculin is in no sense an anti-toxic agent similar, for example, to the anti-

toxin of diphtheria. Tuberculin is a toxin or poison itself, and the object of injecting it is to produce a reaction against the tubercle bacillus and its poison on the part of the various cells of the body. Experiments show that when the cells are thus stimulated anti-toxic bodies are formed in greater quantity than is necessary to antidote the poison introduced, and thus we have an excess of anti-toxic substances which go to combat the natural disease. The form of immunity resulting from such injections is known as "active immunity" in contra-distinction to the form of immunity produced by the diphtheria anti-toxin, in which case the antidote to the poisons of the disease is introduced already formed in the serum we inject. This latter process is known as "passive immunity."

It can readily be understood that when we endeavor to produce an active immunity we must have a certain amount of vitality on the part of the cells of the body in order to enable them to respond to the stimulus and to produce antibodies. When the power to react to the specific toxin of the disease is lost, it must be evident that treatment by tuberculin is not only useless but harmful. For the same reason tuberculin can exert no curative effect on those symptoms and conditions which are dependent upon secondary infections by the pneumococcus, streptococcus, staphylococcus, and other foreign forms of bacteria.

Thus we see that the field of usefulness of tuberculin as a therapeutic agent becomes distinctly narrowed, and the importance of careful study in order to determine what cases are suitable for treatment by this substance and what are not is manifest. It must be remembered, however, that aside from its curative power, tuberculin has the property of ameliorating many troublesome symptoms, even in severe types of pulmonary tuberculosis, and therefore may favorably influence the course of cases in which a complete cure is an impossibility.

INDICATIONS FOR THE USE OF TUBERCULIN.

Like all other therapeutic agents, tuberculin has specific indications which must be carefully regarded if we are to obtain satisfactory results and avoid injuring our patients. The doctor who administers tuberculin indiscriminately to every case of pulmonary tuberculosis is sure to become a confirmed skeptic as to the value of this method of treatment. Exper-

ience has shown that tuberculin is suited to uncomplicated cases of tuberculosis in the first and second stages, in which the maximum daily temperature does not exceed 100 degrees F. It is particularly in the incipient type of the disease that the best results are to be expected. Chronic (fibroid) cases that have reached a point where no further progress can be obtained by hygienic and dietetic treatment are also markedly benefited by a course of tuberculin injections.

CONTRA-INDICATIONS FOR THE USE OF TUBERCULIN.

The contra-indications for the use of tuberculin are distinct and important. The first of these is fever. Tuberculin should not be used in any case of pulmonary tuberculosis in which the maximum daily temperature with the patient at rest exceeds 100 degrees F. The reason for this is evident when we recall the fact that a pure tubercle infection rarely causes a rise of temperature exceeding 100 degrees. Higher temperatures almost invariably indicate the presence of a mixed infection over which tuberculin can exert no beneficial action. Those who are thoroughly experienced in the use of tuberculin may occasionally, with very close supervision, employ the remedy in more severe cases; but the beginner should confine himself only to the mildest cases before attempting to carry out the treatment on the more severe ones.

Cardiac weakness is, in my opinion, a distinct contra-indication for the use of tuberculin, unless it can be distinctly shown that the cardiac debility is in no way dependent upon the absorption of the toxic products of the tubercle bacillus. Healed valvular lesions of an inflammatory origin do not necessarily contra-indicate the use of tuberculin; but degenerative processes of the heart muscle and coronary arteries demand great caution in the application of this method of treatment.

Debility. If the body strength is much reduced the likelihood of the tissues reacting to tuberculin in such a way as to form antibodies is very slight. In cases where there is marked physical weakness I much prefer to improve the general tone of the patient's health by means of diet, fresh air, rest, and medicinal agents before attempting to start injections of tuberculin.

Tendency to hemorrhage. In the congestive type of pul-

monary hemorrhages tuberculin is not contra-indicated, but must be used with caution. I have never seen hemoptosis brought on in a tubercular patient by the use of tuberculin, and Roepke and Bandelier, who have studied this question in a large number of cases, state that tuberculin does not increase the tendency to hemorrhage. In the type of hemorrhage found in the late stages of the disease, dependent upon ulceration into large vessels, I regard the use of tuberculin as dangerous, and would never employ it under such conditions.

Pregnancy is in no sense a contra-indication to the use of tuberculin, and clinical observation would seem to indicate that children born after a course of tuberculin were particularly strong and healthy.

THE PRACTICAL APPLICATION OF THE TUBERCULIN TREATMENT

There are three methods of administering tuberculin, namely, the subcutaneous, the oral and the rectal. Latham and a few other clinicians of note have reported some cases treated



FIG. 1.—Tuberculin syringe graduated in hundredths of a cubic centimeter.

by the oral and rectal methods, but the vast majority of observers prefer to administer the remedy subcutaneously. After trying the various methods, I have abandoned all the other for the subcutaneous injection, which I believe to be more efficient and more accurate.

THE SITE FOR THE INJECTIONS.

The best region for making the injections is the skin of the back between the shoulder blades. The skin should be raised in a large fold and the needle introduced as in making an ordinary hypodermic injection. Before introducing the needle the skin should be scrubbed with an antiseptic soap and cleansed with ether or alcohol. It is necessary to have a syringe graduated in one-hundredths of a cubic centimeter for making the injections. Personally, I employ what is known as the "Sub

Q" glass syringe (Fig. 1) which can be readily sterilized and is not likely to get out of order.

MAKING THE DILUTIONS.

Inasmuch as it is necessary to begin the treatment by injecting .00001 c.c. or even .000001 c.c. of the crude tuberculin, it is necessary for us to have some method of diluting that will insure accuracy of dosage. A great many plans have been

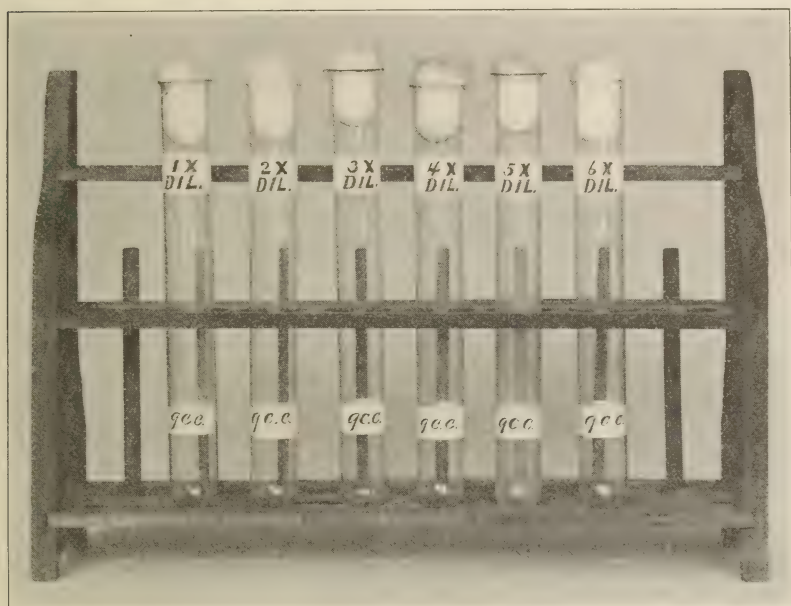


FIG. 2.—Rack containing tuberculin in various dilutions. The band marked 9 c.c. indicates the point to which the tube is filled with .5% carbolic acid solution preparatory to making the dilutions.

devised for this purpose, and all have their advantages. For my own use I have devised a method which is simple and which enables one to make the dilutions readily. It is carried out as follows: Six test tubes of uniform size are placed in a rack. (Fig. 2). Nine c.c. of a one-half of one per cent. carbolic acid solution are placed in each tube, and the point to which they fill the tube is permanently marked by means of a file. This obviates measuring the 9. c.c. out in a graduate each time the dilutions are made up. I now place in tube No. 1, 1 c. c. of crude tuberculin, and label the tube "IX" dilu-

tion. Each c.c. of this dilution contains .1 c.c. of crude tuberculin. The tube is thoroughly agitated, and 1 c.c. of this dilution is placed in tube No. 2, which is then labeled the "2X" dilution. Each c.c. of this dilution contains .01 c.c. of crude tuberculin. I continue this process, taking 1 c.c. from each tube and transferring it to the tube next in numerical order, until I reach the 6X dilution, each c.c. of which contains one .000001 of a c.c. of the crude tuberculin. By using .1, .2, .3 or any other fraction of a c.c. we desire from any tube we can get any dosage down to .0000001 of a c.c. This method can be employed no matter what form of tuberculin is used. The tubes should be plugged with sterile cotton. Dilutions should be made fresh every ten days to prevent deterioration.

DOSAGE.

When using "Old" tuberculin or Deny's Bouillon Filtrate I always begin the treatment in adults by injecting .000001 c.c., or in other words .1 c.c. of the 5X dilution. I then increase the dose by .1 of a c.c. at each subsequent injection until I reach the 3X dilution. From then on the increase should not be so rapid, as reactions are likely to occur if the dose is not carefully regulated. Instead of increasing .1 c.c. at each injection I increase .05 c.c., giving at the first dose .1 c.c., .15 c.c. at the second dose, .2 at the third dose, .25 at the fourth dose, and so on. When the .2X dilution is reached the increase should be slower still, increasing only about .02 c.c. at each injection. The maximum dose of "Old" tuberculin is 1 c.c. of the crude substance. It is not often, however, that it is necessary or wise to give this amount. "New" tuberculin can be measured in the same way as the "Old" tuberculin by ignoring the solid contents and taking into account only the liquid contents. The dose at the beginning should be .0002 c.c., (.2 c.c. of the 3X dilution), which is equivalent to .000001 of solid substance. Starting with the .0002 c.c., the increase in the dosage can be made exactly as in the case of "Old" tuberculin. The maximum dose of Bacillen Emulsion is 5 milligrams of the solid substance.

INTERVAL BETWEEN INJECTIONS.

My practice is to give two injections a week until the 3X dilution is reached, and then give one injection every five days

until the 2X dilution is reached; then one injection a week until the 1X is reached, and then an injection every two weeks; this, of course, providing the case is pursuing a normal course and is free from any decided reactions. It is very important not to attempt to inject too frequently or to increase the dose too rapidly. Clinical experience has clearly shown that there is nothing to be gained by administering large doses of tuberculin, and if there is the least doubt as to whether the dose should be increased or not, it is better to repeat the previous dose. While a patient is receiving the tuberculin treatment it is necessary to keep an accurate record of his temperature range, his weight, cough, digestive conditions, and any other symptoms that may arise. The temperature should be taken at 8 A. M., 3 P. M., and 8 P. M., by the patient who should be provided with a card for this purpose. There should also be space on the card for the patient to note any unusual developments that may occur, especially as regards night sweats, chills, digestive disturbances, aggravation of cough, etc. The patient should be weighed once a week.

Cases that are pursuing a favorable course should be free from any decided temperature reaction, should show a gain in weight, an amelioration of the cough, and improvement in nutrition. Cases that are influenced unfavorably by the injections show rapid rises of temperature following the injections, loss of weight, aggravation of the cough, etc. The most accurate guide to dosage is the temperature curve. Our aim is to avoid reactions as far as possible. Some cases that I have treated have gone through the entire course of treatment without a single reaction. One or two mild reactions with a rise of temperature to 100 or 101 are not necessarily disadvantageous, but if they recur repeatedly the dose must be materially reduced or the treatment abandoned. When a reaction of more than one degree occurs it is my custom to wait at least a week after all signs of reaction have subsided and then repeat the dose that caused the reaction. If no reaction follows this time, I then increase the dose very cautiously as before. Next to the temperature curve the general state of nutrition and the character of the pulse offer the best guides as to dosage. If there is too marked increase in the pulse rate or a tendency for the patient to lose weight under the injections, it is best to abandon them.

LENGTH OF TREATMENT.

It is impossible to eliminate the element of time in giving a course of treatment by means of tuberculin. This is readily understood when we recall the fact that the object of the tuberculin treatment is to create in the body a gradual immunity to the toxins of the tubercle bacillus or to the organism itself. Three months is the shortest time in which we could expect any permanent gain whatever, and the average case will require from six to twelve months treatment to accomplish any satisfactory results.

PRACTICAL RESULTS OF THE TUBERCULIN TREATMENT.

Though it is interesting to know that tuberculin is exquisitely homeopathic to the majority of incipient and moderately advanced cases of pulmonary tuberculosis, and conforms closely to the modern requirement of an agent for the production of an artificial immunity, we must still ask to what extent it has stood the test of practical clinical experience before we can consider it a valuable addition to our means of combatting pulmonary tuberculosis.

Clinicians are by no means agreed as to the exact scope and value of tuberculin therapy. Some deem it entirely useless; a much larger number consider it of distinct value in a limited group of cases, while others believe that it can be used advantageously in almost all cases of tuberculosis in which a mixed infection is absent. It is interesting to note that those who have had the most experience with tuberculin are most favorably impressed with its therapeutic value. Trudeau, who probably knows more about tuberculin therapy than any other physician in the United States, is a warm advocate of the use of tuberculin in cases of early or partially healed tuberculosis. According to his statistics, taken from a large number of cases, the percentage of recoveries in cases that have received tuberculin in addition to the general hygienic and dietetic treatment is about twenty-one per cent. greater than similar groups of cases that have received only the hygienic and dietetic treatment. The German clinicians, as a whole, speak very highly of the beneficial effects of tuberculin when properly administered. Their reports as to recoveries under the use of tuberculin approximate very closely the statistics of Trudeau.

Without going further into a detailed account of the various statistics that are given on this subject, I shall content myself with giving a brief statement of my own impressions gathered from three years experience with the use of tuberculin. First of all, I am firmly convinced that tuberculin can be considered in no sense a substitute for the general hygienic and dietetic treatment of tuberculosis; in fact, it must be regarded merely as an adjuvant to the general constitutional treatment in suitable cases with the idea of increasing the patient's resistance to the tubercle bacillus and its toxic products. Its employment in cases presenting evidences of secondary infection, such as high range of temperature, marked emaciation, etc., is not only useless but even extremely harmful. There is no reason to expect, either from a study of the pathogenesis of tuberculin or from our present knowledge of the laws of immunity, that it could accomplish any good result in such cases. Practical observation amply confirms these facts.

Cases of incipient tuberculosis, in which the disease is confined to one portion of the body, in which fever is absent or present to only a slight degree, and in which the state of nutrition is good, are markedly benefitted by a course of tuberculin injections properly administered. The judicious use of the remedy in these cases is absolutely harmless, and its beneficial action is evident in almost every case. Not only does it increase the patient's chances of recovery about twenty per cent., but it renders the patient much more resistant to a fresh outbreak of the disease. Relapses are much less common in cases so treated than in those that have not received tuberculin.

Another group of cases in which tuberculin is of decided value are those which have progressed toward recovery under general constitutional treatment but finally reached a point where no further progress can be made. In these partially healed cases a course of tuberculin injections is decidedly useful in stirring up the reactive powers of the organism and in bringing about a complete arrest of the disease. Inasmuch as cases of this type are frequently met with, we find here a large field for the employment of the tuberculin treatment.

Children of tuberculous parents who show suspicious signs of an outbreak of the disease are also beneficially affected by tuberculin. Their resistance to the disease is increased by its use, and their general nutrition and vitality are decidedly improved.

It is beyond the scope of this lecture to refer to the use of tuberculin in the treatment of localized forms of tuberculosis in other portions of the body than the lungs, such as tuberculosis of the lymphatic glands, of the bones, of the skin, etc., and I will simply state that some of the most striking effects of tuberculin treatment have been obtained in the treatment of these conditions.

PUNCTURE DIAGNOSIS.

BY

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(Read before the Homœopathic Medical Society of the State of New Jersey, Cape May, 1910).

DIAGNOSIS by puncture with the trocar is a very old procedure in medicine. To my surgical friends, much that I say will be familiar and unnecessary; but, to judge from the cases that I see in consultation, there are many medical men who have considerable timidity about puncturing their patients. While conservatism is a good thing, there are times when the interest of the patient demands an exact and early diagnosis and in making such exact and early diagnosis, the withdrawal of fluid by puncture is sometimes a necessary procedure. It is one that I would urge my medical friends to use more freely. The chief places that are available in puncture diagnosis are the spinal canal, the chest, the abdomen and the joints.

In regard to the spinal canal, there are two classes of cases that demand lumbar puncture. One is where you suspect meningitis and the other is where you do not. In patients where the symptoms point distinctly to the existence of a meningitis, there can be no question of the utility of a lumbar puncture and withdrawal of the spinal fluid. One object of doing this is to relieve the pressure caused by the excessive accumulation of fluid. Another and very important object is to make a bacteriological diagnosis of the type of meningitis present. Bacteriological therapeutics has advanced to the point where we are no longer justified in simply making a diagnosis of meningitis. We must know what kind of a meningitis it is, whether a tubercular meningitis, or a streptococcic or a meningococci or pneumococcic meningitis. This differentiation is

especially necessary in the application of the various curative sera, especially the Flexener serum, for a serum prepared from meningococci is absolutely worthless in a pneumococcic meningitis and vice versa.

Of the cases where you do not suspect meningitis, there is a group in which I have come to rely on lumbar puncture as a valuable aid. This group consists of the infectious fevers of unknown origin. There is a class of cases which resemble typhoid fever or miliary tuberculosis, with fever and perhaps a moderate headache. Widal reaction and tuberculin reaction are negative. These tests are not conclusive because tuberculin reactions are often negative in miliary tuberculosis and Widal's are sometimes negative in clinical typhoid. After eight to twelve weeks a certain number of these cases will develop clinical signs of meningitis, retracted head, fixed pupils, crossed eyes and contracted flexor muscles. I have happened to see several such cases late in the disease and by lumbar puncture made a diagnosis of infective meningitis, recognizing in the spinal fluid the type of bacterium present. Now, such cases recognized late in the disease invariably die. It is probably true that such a case recognized in the early weeks would have some chance of recovery. Lumbar puncture is such a simple procedure, that it is my rule to take a specimen of lumbar fluid in every case of fever of unknown origin that has lasted more than a week. I try to do this as regularly and uniformly as I examine the urine and the blood. By so doing, I believe that some day I will recognize some of these infective meningitis cases early enough to give the patient a better chance for his life.

In regard to puncture of the chest, we are all familiar with the use of the aspirator in the diagnosis of pleural effusion. However, from my experience in consultation, I know that the aspirator is not used often enough nor early enough. I believe in early and thorough draining of the chest cavity in every fresh case of pleurisy with effusion. Early removal of fluid is especially important in the pleural cavity to avoid compression and fixation of the lungs in a faulty position. The pleural cavity differs from the abdomen in this, that the abdomen can contain a considerable amount of fluid without interfering with the function of the abdominal organs. On the other hand, in the pleural cavity, even a small accumulation of fluid compresses the lungs. In the presence of inflammation,

the lung is very apt to be fixed by adhesions in the compressed condition. Afterwards it is a very difficult matter to distend it to its normal inflation. Much of this lung compression and fixation can be prevented by the early evacuation of pleural exudate.

In puncturing the pleural cavity, we have been warned of the danger of puncturing the lung. I have expected that if I ever did puncture the lung the patient would immediately have a haemorrhage. However, in puncturing the lung of lobar pneumonia, I have been taught by experience to have no fear of puncturing either sick or healthy lung at any point. With an aseptic skin and a small aseptic needle, I have never seen the slightest unfavorable symptom and I have punctured the lung in at least one hundred cases up to the present time. Do not, then, allow fear of possible puncture of the lung to interfere with your early and frequent exploration of a suspected effusion of the pleural cavity.

An adaptation of puncture of the chest that I have been using for some months is puncture of the affected lung in lobar pneumonia for the purpose of making exact bacteriological diagnosis. In pneumonia, as in meningitis, I do not think that we are now justified in making a diagnosis simply of pneumonia. We should know what kind of pneumonia, whether pneumococcic, streptococcic, pneumobacillic or influenza or whatever the microbe might be. This is quite necessary in the application of vaccine therapeutics and bacteriological therapeutics. At the Flower and Metropolitan Hospitals, I have made some interesting applications of bacteriological therapeutics in pneumonia. I would not minimize the value of the homœopathic remedy in the treatment of lobar pneumonia. In the early stages, it is efficient. However, at the Flower Hospital, many advanced cases are brought in on the ambulance and a great many of them die. By the identification of the causal bacterium in pneumonia and the use of that bacterium as a remedy, I have seen some remarkable recoveries in cases where I did not expect the patient to recover. In applying bacteriological therapeutics to pneumonia, the usual method has been to make a culture of the infecting microbe from the patient's sputum; from this to prepare a vaccine, sterilize it and inject it into the patient. In principle this is a purely homœopathic or rather isopathic treatment. In technique it is the direct outgrowth of the work of Prof. Wright and his opsonic thera-

peutics. The theory on which the vaccine treatment is based is this: All cells are endowed with the power of resisting the attack of microbic infections by the manufacture of substances which either dissolve the microbe or neutralize the microbic poison. At first sight, it might seem unnecessary to take the microbes from the patient's sputum and put them back in his blood; but if you will reflect for a moment, you will conclude that the microbes that are in that patient's air cells and sputum and in the pneumonic exudate are not really in the patient but in the air cell, that is, outside the patient's circulation. They are really outside of the patient. Now, you take them from the exudate which is outside of the patient and put them back into the patient's blood and the presence of the microbe there sets in motion the protective apparatus of the body in the manufacture of these chemicals to destroy the microbes or antidote the microbic poison. This power of manufacturing antibodies is possessed by every cell of the body. In a case of pneumonia it is probable that the tissue of the lung has been busy manufacturing antibodies and in a patient who is distinctly losing ground, it is reasonable to suppose that this power of the cells of the lung tissue is exhausted. So we inject the microbe at another point, as the buttock or shoulder, and set the cells of the skin and subcutaneous tissue to work manufacturing antibodies.

Some months ago, I saw a case of pneumonia that was apparently dying. The lips were cyanotic, mucus rattled in the throat, the skin was cold and sweating and the patient had not expectorated for twenty-four hours. The attending physician and I agreed that the patient probably would not live twelve hours longer. This seemed to be a suitable case for an experiment that I had in mind and I suggested to the doctor, that since the patient was so far gone that we could not hurt him, it might be a good thing to give him a chance by setting to work manufacturing antibodies tissues which had not yet been brought into operation. As the patient had ceased to expectorate, no culture could be obtained in this way and there was no time to wait for culture could it be obtained. I punctured the pneumonic lobe with a long fine needle attached to a hypodermic syringe and withdrew a few drops of serum. These I injected under the skin of the buttock. The next day the patient was better. The next day he was about the same and I repeated the dose. The patient made slow recovery. This

was encouraging. I have tried it on some twelve cases since. Six of them have recovered and six have died; but as all these cases were desperate ones, I really believe that the treatment is worth further development.

This is not a treatment to adopt in every case of pneumonia or pleurisy. Since that time I have seen many cases of pneumonia and pleurisy in the Flower Hospital and the Metropolitan Hospital that I would not dream of treating in this way. Consider what you are doing. You take a living microbe with its possibilities of pus formation or septicaemia and inject it into the circulation. You are running a strong chance of developing pyaemia or septicaemia. I think only desperate cases are suitable ones for taking such a risk. It has been suggested by Dr. Klots and others that the fluid withdrawn from the lungs should be sterilized at 60 c. for ten minutes to diminish the vitality of the bacteria or kill them. One would still get the benefit of the bacterial poisons. A possible objection to this heating is that in bacteriological therapeutics there is no doubt that the most efficient medicine is the live microbe. Heating invariably diminishes the efficacy of the microbe and its poison. In these desperate cases, I would not try to diminish the therapeutic value of the dose in any way and I would prefer to take the chance of sepsis and give my patient his best chance of recovery.

The technique of puncturing pneumonic lungs in the way that I have described has some points of advantage over culture of the microbe from the sputum. First, you avoid possible contamination by the myriads of mouth bacteria. Then, doctors in the country and many doctors in the city cannot make the vaccines themselves. Manufacture of vaccine is a tedious and expensive process. Time is lost in making the vaccines. Often desperate cases of pneumonia have ceased expectorating and no sputum is available. For this reason, I think the technique of withdrawing the microbic fluid direct from the lung and injecting it under the skin at another point has a distinct place in therapeutics. The same technique is available in pleurisy or any microbic disease where you can get a few drops of fluid. In this connection, I might say that Dr. C. C. Howard, at the Metropolitan Hospital, had a case of streptococcus meningitis, which, according to the rules of his art, should now be dead. The patient is alive and improving and the doctor can attribute the improvement to nothing else than the fact that his interne,

at the suggestion of Dr. Sloat, in tapping the spinal canal followed out this idea of mine and reinjected some of the spinal fluid under the skin.

Puncture of the abdomen for the relief of ascites is familiar to us all. I think it is not used with sufficient frequency in making a diagnosis. In malignant abdominal conditions, the presence of the early demonstration of a bloody ascitic fluid is valuable in determining a diagnosis. There is one lesion of the abdomen which, in my opinion, should never be punctured and that is an intra-abdominal tumor. Any of you who have punctured a joint and have seen the joint fluid squirt out through the hole after withdrawing the needle will readily understand how a cystic tumor under tension when punctured would discharge its possibly septic contents into the abdominal cavity, running the risk of septic peritonitis. If an abdominal tumor is firmly fixed to the wall of the abdomen by inflammatory adhesion, I see no objection to puncturing it; but puncture of an abdominal tumor that is not adherent to the abdominal walls I regard as a foolhardy procedure. It is much safer to make an abdominal operation and puncture the cyst through the abdominal incision.

The next division of our topic is puncture of the joints. Puncture of a joint is valuable to the practitioner in two ways. In the first place, you can often relieve the suffering of an acute arthritis or synovitis by withdrawing the fluid. In the second place, it is useful for diagnosis. You and I have treated many a case of rheumatism or what we called rheumatism where the knee joint or ankle joint or wrist bulged with fluid, the patient suffered intense pain, and it has often taxed our wits to relieve that pain without poisoning the patient. What I do nowadays is to insert an aspirator and draw off the joint fluid and am surprised to see what relief is afforded the patient by simply relieving tension. You know that pain is nearly always a matter of pressure on some nerve filament. In nearly all inflammatory diseases, relief from tension is equivalent to relieving pain.

Puncture of the joint has the additional advantage of giving you a more exact diagnosis. A local infective arthritis, especially a suppurative arthritis is a fit subject for surgical treatment and thorough drainage. In such a case, much time is lost in waiting for a supposed rheumatism to get well.

It is coming to be the opinion of pathologists that all joint inflammations are infective. On the other hand you will be

surprised to see how many specimens of fluid from inflamed joints are free from bacteria either by culture or by staining on the slide. There are two explanations of this. One explanation is given by pathologists who have examined such joints after death or after operation, that the bacteria are deep in the tissue of the joint and do not escape into the joint fluid. Another explanation is that the microbes have settled at some distant point, as an infective wound, and that the joints are inflamed by the toxin circulating in the blood. This doctrine of a toxic inflammation of the joint from a distant point has an important bearing in the therapeutics of inflammation of the joints. It sets the therapist hunting for a primary focus of infection, as carious teeth, tonsillitis or some neglected pocket of pus somewhere in the body as the source of the arthritis. It is the idea that lies at the basis of Dr. Fuller's treatment of arthritis by excision of the seminal vesicles; for the deep urethra and seminal vesicles are sometimes the origin of chronic joint inflammation.

A final word on the technique and preparation of specimens of puncture fluids will not be amiss. In making a puncture diagnosis, you need a hypodermic syringe with extra long needles, glass microscopic slides and a tube of culture medium, as the familiar culture tube used for throat cultures. The syringe is preferably all glass and the needles should slip on without screw threads. All screw threads need washers and washers do not bear boiling more than a few times. The distal end of the syringe barrel should be concave, so that an air bubble will easily seek the hole and pass out. Several all glass syringes that I have bought have flat ends. The air bubble clings to the side of the barrel and is very difficult to expel. In the all metal syringe, one cannot see the nature of the fluid withdrawn or indeed cannot see whether any fluid or only air enters the syringe. One needle should be $1\frac{1}{2}$ inches long for chest and joint puncture and one three to four inches long and extra heavy for lumbar puncture. The needles and syringe should have been boiled before use and the hands of the operator and the skin of the patient should be sterilized. Cleansing the skin with a mixture of equal parts of alcohol and ether is sufficient. Local anaesthesia can be used if desired but is usually unnecessary. Having withdrawn the fluid, drop a few drops upon the culture medium and spread a few drops more on a glass slide. Here, a common error is made by press-

ing the slides together and allowing them to dry. The drop of specimen glues the slides together firmly. Such a specimen is useless for a microscopic examination. The drop of fluid should be spread out thin upon the slides, *the slides separated* and allowed to dry *separately* in the air. When dry, they are ready for staining and examination. When dry, the specimen will keep indefinitely and it can be simply wrapped in paper or placed in an envelope. I might mention that this is also a common error in sending specimens of blood to a pathologist for examination. The blood should be spread out in the same way in a thin layer, the slides separated and allowed to dry in the air. They are then ready for staining or for transportation.

**DIVORCEMENT OF INTER-RELATIONSHIP IN THE HUMAN ECONOMY,
OR, "I KNOW EYES, NOT MEN."**

BY

CHARLES H. HUBBARD, CHESTER, PA.

THOUGH this paper is written by a member of the Bureau of Ophthalmology, Otology and Laryngology, and its illustrations are drawn largely from those specialties, the subject is so comprehensive that man's whole organism may need to run the gamut of consideration.

An aggregation of experiences has persistently thrust this topic upon the writer's attention with a persistency that will not down. And it is a theme so important and so susceptible of application to the whole realm of medical practice that any physician may find food for serious thought in its contemplation.

During your essayist's connection with an Ophthalmic institution in New York, and while going through the hospital wards with its celebrated founder, this eminent specialist, replying to a patient whom he did not recognize, and who said to him, "Why doctor, I was in your office yesterday, don't you know me?" remarked as follows: "*I know eyes, not men.*" In the Eye Department of a well-known Homœopathic hospital, the chief of that section said to an assistant, when told that a certain patient applying for treatment had some hepatic disorder, "*I treat eyes, not livers.*" Not long since a patient in.

my office made this remark: "Doctor, I came in to have my ear treated. I haven't been well myself, and I thought while I was being treated, would have my ear doctored also." I quote but a few illustrations from many similar ones, to introduce the topic. And they serve to emphasize the reckless reasoning and still more reprehensible practice that permeates the whole complex ramification of the healing art. And hence the statement needs no defence that the tendency to recognize simply a part; to see local lesions and to treat diseases by name or locality, or depend upon pathology alone, while oblivious to the man with a personal equation, is an error and an evil wholly unwarranted by any process of logical deduction, and without justification by demonstrated fact. And this is especially true with regard to those who assume to accept the philosophy of Homœopathy.

To elucidate and establish our proposition, we reason from analogy and make comparisons from the complex, yet harmonious expressions of nature and her laws, and at the same time try to interpret the vital relationship of a part with every other part, and the exquisite susceptibility and resentment of each to any overtures of divorcement. The concrete proposition is this: "No part of man's organisation can be separated from its divinely associated union in the human economy without disturbing somewhere, somehow and in some degree, the normal equilibrium of that organism." And it must necessarily follow that no part of man's structure can exist and functionate in its highest development and perfection, wholly independent of its organic relationship; that every individual atom or ion of the human body has vital relationship with every other ion or atom, and hence no disturbance can occur in one atom without derangement in some other atom or atoms. It is, therefore, logical to conclude that whatever means are employed for the cure or relief of a malady, without regard to its location or character, must affect other structures than those presenting symptoms for which treatment is instituted.

Scientists tell us that one cannot introduce his finger into the ocean without causing a disturbance of the relationship of its elements that can be felt around the world. A potent illustration of this law of inter-relationship is found in one of the greatest wonders and most beneficent utilities of the world—wireless telegraphy. In demonstrating this law of molecular inter-dependence, we find the development of the electric im-

pulse by which wireless waves transmit messages through space is accomplished without any apparent conductive medium, though the record of its speed is 186,000 miles a second. And we learn from laboratory research that the presence of a micro-organism in the body, so microscopic that millions may find lodgment on the point of the finest cambric needle, can and does so profoundly derange the organism that disintegration and death follows. This basic principle and inter-relationship may be further demonstrated by a brief survey of the psychical and the psycho-physiological phenomena in nature. We observe man fall in a swoon from the sight of blood; from witnessing an accident or a surgical operation; from the pick of a pin; from sudden or exciting news; and a sudden fright has turned the hair white in a few hours. Unexpected tidings or unusual mental strain produces diarrhoea, micturition, nausea, vomiting, headache, and even death from the shock, and many other manifestations of a deranged system. How different odors, and also how prismatic color-waves affect respiration, and the vaso-motor nervous system are interesting and pertinent examples that prove the relationship of all things. Look at drugs and explain their "elective affinity" if you can. Point out from its cell structure why one drug has 4 o'clock aggravation, and another has 4 o'clock amelioration; why one affects the right and others the left side; while some seem to be created for the female sex and ignores the male. These differences and modalities that give individuality to the drug might be indefinitely extended. And we see all about us the various types of humanity, with their idiosyncrasies, and marked differences in mental, moral, and physical characteristics and tendencies. And yet, by no process of discovery revealed to mortal man, is it possible to individualize and differentiate the atoms responsible for these profound results in the great alchemy of nature. If these facts are true, it requires no alarming stretch of the imagination to believe that the most infinitesimal aberration in any part of the animal economy, may produce disorder in any part, or even the whole organism. How and to what extent is not fundamental to this proposition. Because finite man is unable to fully grasp the great truths of nature, in no way militates against their existence or man's acceptance of them. If man believed only that which can be established with mathematical accuracy, his index of accepted facts would be materially circumscribed. The world abounds

in concrete examples of nature's harmonious relationship and limitless phenomena that elude the tireless search of the finite mind.

Believing that the foregoing should prepare one to recognize the "elective affinity" and inter-relationship of matter, and the ready response of the human system to this law, we may consider a few specific illustrations and clinical examples to confirm this vital relationship. It matters little which part of the organism one may essay to interrogate. Let us consider the Eye, with its delicate and complex mechanism and its numerous ailments. What should be thought of the oculist, who, when called to treat amblyopia, refused to consider anything but the eye, blindly ignoring its many and various aetiological factors and its ominous array of manifestations. To enumerate its constitutional, organic, local and functional causes and conditions would consume the time limit of this paper. In fact, an unlimited number of eye lesions with an equally imposing list of causative agencies might be narrated until one stands appalled at the faintest suggestion of ignoring the man and knowing nothing but a part.

Let us briefly call attention to the catarrhal inflammations of the upper respiratory tract, so common and so persistent. It is unnecessary to specifically mention the various manifestations of disease and the many deformities of that region, or their manifold causes. Recognizing that their name is legion, what shall be thought of the character of the treatment so frequently employed with apparently little or no thought of the man, the vital entity. Is it surprising that these troubles persist; that the treatment is often so woefully disappointing; and that discouraged sufferers fall into the rapacious maw of the omnivorous quack? Again we ask, Can a part be safely divorced from the whole? And, what shall the verdict be regarding the aurist who says, "I treat ears, not men," when it is universally recognized that a majority of ear lesions find their nemesis in the nose and throat, though there are many other predisposing and exciting factors. Incomprehensible as it seems, there are times—countless times, when the practice of not a few is perilously near an absolute divorcement of a part from the whole. And yet, such treatment, wholly untenable as it is in the majority of cases, not infrequently removes the expression of disease, and seems to end it. But time or a thorough analysis of the case may ultimately disclose the un-

welcome fact that nature will not be mocked, and that the local interference together with the arbitrary exclusion of other elements, has not only failed to effect a cure, but it has awakened into pernicious activity, dormant forces that might have slept on forever, but have now become ravishing forces of evil. It is a belief, held by not a few, that when curative results follow the introduction of a medicament into the human economy by methods other than the digestive tract, that such therapy contains elements that are Homœopathic to the case, and hence favorable action must logically follow. Neither the law of *Similars* nor that of the human system, necessarily dictates the method by which therapeutic agents shall be introduced into the body to secure favorable results. Though not antagonizing an acceptance of the law of *Similars*, other laws of cure are recognized and utilized by many of the Homœopathic faith. In the light of present day discoveries and achievement, man must look with wide open unprejudiced vision into the face of reason and demonstrated fact. And out of these established truths there should be evolved a tenable, working system that all honest practitioners of medicine may profitably accept. And this multiple system might properly be called the "Medical Trinity," wherein we have Symptomatology, Pathology and Clinical experience, and from this triune alliance, develop a rational system of arriving at the "totality of the symptoms." Every physician recognizes that conditions not infrequently arise when a malady is of such a nature that local treatment, or operative or other procedures are unquestionably indicated, and in fact may be demanded to save life; and to go on a symptom-matching hunt under such circumstances, should merit public reprobation.

In view of the overwhelming verdict of nature that no atom or ion within the vast domain of her sovereign territory exercises a separate and wholly independent existence, thereby establishing a universal law of inter-relationship applicable to all the needs of humanity, we are naturally brought face to face with its therapeutic consideration. As man cannot determine the ultimate divisibility of matter or its composite and vital relationship in the world of matter, so he cannot know the limit of its dilution capable of curing the sick. With these proven facts from nature, the cynic, the carping critic, and the blatant demagogue who sneers at Homœopathy and the "indicated remedy," should find abundant food for reflection and possible conversion.

In conclusion, and as a natural corollary to the foregoing, it is pertinent to consider the teaching of *Materia Medica* and its clinical application in our Homœopathic Medical colleges. Experience and observation warrants the conclusion that some scheme should be adopted to secure greater faith and wider knowledge of our *Materia Medica* and its therapeutic application. And it is assuredly within our province to suggest to the teaching force in our medical colleges, that it would do well to seriously consider the wisdom of combining the teaching of *Materia Medica* with clinical instruction, to a far greater extent than it has heretofore observed. Every clinical teacher without regard to his branch or speciality, should be a *Materia Medica* man in his field of instruction. And the use of drugs in accordance with the law of *Similars* is a right that the student of Homœopathy may justly claim from his *Alma Mater*. The teaching and practicing of *Homœopathy* by our colleges should constitute the dominant factor in their curriculum. The profession, and the life and perpetuity of the Homœopathic philosophy demand it.

TREATMENT OF RHINOLOGIC CONDITIONS FOR THE GENERAL PRACTITIONER.

BY GEO. W. MACKENZIE, M. D., PHILADELPHIA, PA.

(Read before the King's County Medical Society, New York, May 10, 1910.)

TREATMENT is the ultimate factor in the practice of medicine. It is the question of first importance to the patient, and sooner or later the question will be put: "Doctor, what can you do for my condition?" Before this question can be answered intelligently the physician must (1) satisfy himself that he knows exactly what the condition is (the diagnosis). (2) He must be able to reason out from the history and findings, and oftentimes from the findings, alone, the cause of the present condition (the etiology). (3) He must know the natural course of the disease and the possible complications that might develop (the prognosis). (4) He must know the exact effects

Before beginning the present composition the writer had intended to present a paper that would be of especial aid to the men doing general work, however, after getting under way, he found it quite impossible to do as he had originally intended; for the subject of treatment is so comprehensive that the writer could not do otherwise than write what may seem to most of the general men a rather technical paper. "There is no short road to success," not even in medicine.

of treatment, whether mechanical or medicinal (the treatment). Each of these questions has its particular bearing upon the selection of the treatment.

I. In rhinological practice the diagnosis is extremely important. The average general practitioner, even though he may not examine his case, forms some mental picture of the diseased condition for which his patient seeks relief. In brief, he makes a diagnosis which may or may not be correct. This hit or miss style of making a diagnosis, however, must lead to failure in the treatment of a certain number of cases.

The writer may seem to some to be a crank on the subject of diagnosis, for he never fails to dwell upon it whenever occasion arises. By a diagnosis is not meant the mere tagging of a name to a diseased condition, for names are very fickle and oftentimes faulty. Names are assigned to conditions for convenience merely that we may understand each other more definitely when discussing the conditions. As the writer understands it, a correct diagnosis is one only which comprehends the gross mechanical conditions and the minute pathologic (cellular) changes of every anatomical structure within the nose and its accessory sinuses (local) together with all the collateral changes within the entire body (systemic). When the physician is able to do this intelligently he can, so far as it concerns the treatment of his patient, throw the tag to the winds.

In making a diagnosis the physician must differentiate between the purely (1) mechanical, (2) the purely pathologic and the (3) mixed mechanical and pathologic conditions.

When the condition is purely mechanical the general physician should without question, send his patient to a reliable mechanic who is a specialist for the simple reason that no other form of treatment can be successful.

When the condition is purely pathologic and, so long as it remains so, the general physician can do just as well as the specialist.

When the condition is a mixed mechanical and pathologic one the case should be referred to a specialist for consultation at least. The specialist should determine which of the two conditions is primary to the other. If the primary condition is pathologic, for instance acute inflammatory œdema leading to mechanical obstruction to nasal respiration or to occlusion of an accessory sinus, the case should be treated preferably by medicines, providing there is no immediate haste otherwise in-

dicated. When haste is necessary then cocaine or cocaine and adrenalin may be used temporarily to reduce the swelling, remembering that the cocaine in this case is a mechanical form of treatment of temporary value only.

In other cases where the primary condition is pathologic and the secondary condition is mechanical; for instance in a case of hypertrophies and polyps secondary to nasal catarrh, it is well to treat the secondary mechanical condition first, for the reason that in some of these cases the secondary mechanical condition may be primary to other more vitally important conditions—empyemas and intra-cranial complications. In the case of hypertrophies of the mucous membrane of the turbinals, careful prescribing may eventually effect some improvement of the patient's condition, but in the meantime the patient is compelled to endure unnecessary nasal obstruction, which is not only exceedingly uncomfortable to him, but also detrimental to his general health.

The treatment in all of these cases calls primarily for mechanical interference, after which the patient should be treated medicinally, perhaps it would be better to say systemically.

In some cases where the primary condition is mechanical and the secondary conditions pathologic the patient may be treated first medicinally for the pathologic condition until the maximum amount of "benefit" has been obtained by this method, after which the case should be treated mechanically to thwart recurrences of the same secondary pathologic conditions. In other cases, however, when the patient's pathologic condition is urgent, it may be necessary to proceed immediately to the correction of the mechanical condition. From what has just been said it is very evident that we cannot separate our comprehension of the patient's condition (the diagnosis) from the selection of our treatment.

II. The *Etiology* is perhaps of even greater practical importance than the diagnosis; for if the cause is not ascertained, how can we direct the patient to correct the error in his habits which may have brought about his present condition. It is a trite saying "that the first step in the treatment of any disease is to ascertain the cause and correct it."

Excluding heredity, practically all of the other causes can be reached; among which may be mentioned the *constitutional* of which we find prominently tuberculosis, gout and rheumatism, dyspepsia, alcoholism, chronic constipation, renal insuffi-

ciency, diabetes, etc. *Unsanitary* conditions, foul air, insufficient or poor quality of food and the opposite condition, i. e., diet containing excessive nitrogenous substances combined with sedentary habits; damp apartments, insufficient ventilation in the sleeping room, overcrowded quarters, infrequency in bathing or improper bathing, toxic substances absorbed through the skin or inhaled, alcohol and tobacco by choice of the patient, arsenic, bichromate of potash, mercury, etc., not by choice, but because of occupation; arsenic, iodide of potash, mineral poisons, etc., administered in too massive doses by physicians; *exposures to cold* combined with unpreparedness in the matter of clothing; also exposure to excessive heat: *infections*—most simple colds are infectious as is too the rhinitis associated with the acute infectious fevers.

These cases require oftentimes the skill of a Sherlock Holmes to determine the exact cause.

Primary or secondary mechanical conditions in the nose or throat, which make the patient susceptible to the various pathologic conditions previously alluded to under the heading—Diagnosis. The experience of the writer has proven to him the fact that patients with septum deviations are more prone to contract colds and too they linger longer than in those free of this mechanical condition; furthermore, that these same patients will after the correction of their septum deviation, show less tendency to contract cold than before. If septum deviation and other obstructive conditions tend to increase the frequency of cold in the head, it is evident that it is an even more potent factor in the development of the more vital pathologic conditions, especially empyema of the accessory cavities. I have been able in several instances to correct chronic and recurrent empyema by an operation for the correction of deviations.

The treatment of intra-nasal conditions, especially the chronic and recurrent forms, depends largely upon ascertaining and correcting the cause, which in some instances requires a most searching study.

III. The *prognosis* is of secondary importance to the diagnosis. In other words, one must, in order to treat any intra-nasal disease intelligently know the natural course of the disease and the possible complications that can arise. By being thus prepared the physician oftentimes is able to prevent the occurrence of complications. This comes under the head of pre-

ventive treatment and preventive treatment is of the highest form and outclasses curative treatment.

IV. *Treatment.* The selection depends, as I have attempted to show, upon a great many factors. There is one form of treatment I most heartily condemn and that is the indiscriminate application of various drugs to the nasal chambers, the action of which is but seldom known by the men using them. General men who practice this form of treatment upon their confiding patients and claim at the same time a special knowledge of the subject of rhinology do their patients an injustice and are no better than the quack.

If nitrate of silver solution is used in the nose the one applying it should know its action and the reason for its use. I find men using the glycerine mixture, who when asked the reason for using it, reply that the iodine is used for its antiseptic while the glycerine is used for its hygroscopic properties, contracting the swollen mucous membrane. This was taught in Vienna 25 years ago, and the mixture has been known as the Vienna mixture. The originators of this form of treatment have long since discarded it, but the blind followers continue on, a quarter of a century in the rear. The fellow who uses iodine in the nose never stops to consider the normal secretion from the nose is bactericidal in itself; nor does he recall the fact that antiseptics used in the nose do not reach the bacteria which are located below the epithelial surface and when the antiseptic is used strong enough to reach these bacteria that the epithelia must be devitalized and with the loss of epithelial protection a channel is opened for a fresh infection, which is often worse than the primary one. Again, the glycerine which does produce a temporary shrinking of the mucous membrane does not reach the part that is intended. The important areas to shrink are the regions about the ostea of the sinuses and many of the men who use it, I have found to be men who do not know the general anatomy of the nasal cavity, much less the location of the ostea. It is true the patient may feel some temporary relief of stuffiness in the nose from the use of applications containing glycerine and this is rather an unfortunate circumstance, since it frequently misleads both the patient and the would-be specialist, while a sinus disease may go quietly on doing its damage. I find, too, that the fellow who uses local applications indiscriminately is usually the fellow who seldom washes his hands or sterilizes his instruments. There is noth-

ing like speaking from experience; I once worked in a nose and throat department a number of years ago where patients received a routine of iodine and glycerine treatment, and as far as I can remember, there was very little washing of the hands done by any one. I have visited many dispensaries since and find some of them have improved but very little. The man who with unclean hands pulls off a piece of cotton from a roll to wind on an applicator, infects the roll and the pledget to be used and it is dangerous to put such infected cotton into a patient's nose.

In my practice I have, as every specialist has had, patients (not referred) come to me from these would-be specialists and invariably have found the patients to have been maltreated. I can recall several who have had no catarrhal conditions whatever. I have had more than one child to come with adenoids, which had been overlooked, while the physician had busied himself using local applications to the nose. One indignant mother had paid a physician one hundred and fifty dollars in a year and a half for local treatments which were not indicated, while the removal of the adenoids resulted in a prompt cessation of the symptoms. I have had two patients to come with immense synechias, the result of curettement of the nose under general anæsthesia. One man attempted the curettement of the nose to widen a nasal cavity which was narrowed by a septal deviation.

I could continue citing unfortunate cases of maltreatment which have come under my brief personal observation and no doubt the specialists among you could add many more.

I desire upon this occasion to condemn most emphatically the indiscriminate application of drugs used empirically to the nasal chambers, whether by a man who styles himself a specialist or a general man who practices rhinology as a side issue to increase the volume of business. On the other hand, I heartily endorse the application of such drugs as nitrate of silver applied intelligently to granulation tissue or cocaine to swollen mucous membrane about the ostium of a suppurating sinus or chromic acid to destroy an ectatic bleeding vein. In these latter instances, however, the local action of the drug is known and is used for purely mechanical purposes. Nitrate of silver is the most efficient and when properly applied the least injurious agent that may be used to reduce exuberant granulations, for the same reason that it is used elsewhere in surgery.

A pair of scissors would do just as well, but unfortunately is not so easily handled in the nose as upon the surface. Knowing that skin or mucous membrane will not climb an elevation, as exists in the case of exuberant granulations, the nitrate of silver really levels the granulations so that the epithelia will bridge across the even surface.

Cocaine used on the swollen mucous membrane about the orifice of a sinus acts mechanically to widen the orifice and thus permits better drainage. It is just as much a mechanical form of treatment as is the opening of an abscess elsewhere with a knife. It does not cure the original inflammation which produced the swelling.

The use of chromic acid to a locus kieselbach is a purely mechanical treatment, the object being the destruction of an ectatic vein. Ligation would be better, but is less readily accomplished. Again, the application of a chromic acid band or a strong solution of silver nitrate should be applied only to the part intended and in such a manner as to avoid doing any damage to neighboring parts and in the event of excessive use it should be promptly neutralized, the silver with sodium chloride solution, the chromic acid with bicarbonate of soda.

Without going into too many details the writer endorses the following forms of treatment:

1. Mechanical treatment only for primary mechanical conditions. The mechanical form of treatment includes surgical operations and that form of treatment recently mentioned, nitrate of silver, cocaine, chromic acid, etc.
2. Mechanical and systemic treatments (including the homœopathic remedies) for mixed mechanical and pathologic conditions.
3. Systemic treatment (including the homœopathic remedies) for the purely pathologic conditions.
4. Adjuvant treatment; the use of heat and cold, hot vapor and rarely ice in acute inflammatory conditions of the nasal mucous membrane and accessory sinuses. Cleansing solutions and sprays used judiciously for the removal of crusts, foreign bodies, etc. I think one form of treatment has been very much overlooked, viz., Bier's passive congestion treatment; however, it needs more thorough trying out before passing absolute judgment upon it. Suction treatment with a suitable apparatus especially for sub-acute or chronic empyemas promises to play an important part in our future plan of treatment.

I come now to the "last but not least" important chapter in my paper and that is the use of the homœopathic remedies in the treatment of intra-nasal diseases. The writer feels that something should be said in behalf of our remedies. In a paper upon colds in the head (*HAHNEMANNIAN MONTHLY*, March issue, 1910) brief reference was made to a fact very patent to the writer, namely—that there are a number of intra-nasal and throat conditions which are merely local expressions of constitutional or systemic pathologic conditions, the primary source of which may be located in some distant part of the body.

To treat the nose locally with drugs to correct the secondary condition instead of treating the primary conditions elsewhere would be as illogical as to treat a primary mechanical condition, such as a septum deviation, by internal remedies. I condemn both forms of treatment alike.

The limited time remaining will not permit me to go into detail as to the indications for the use of the different remedies which have been found useful by myself and others.

In order to determine the scope and value of homœopathic remedies in the treatment of rhinological conditions, I decided to submit the question to the leading specialists of our school. Accordingly I sent letters of inquiry to one hundred and thirty specialists selected from the membership list of the American Homœopathic O. O. & L. Society. Fifty-one replies were received. These replies were in most instances so cordial and instructive that I feel it will be necessary to write a separate paper on this phase of the subject at some later date.

The questions submitted were as follows:

What homœopathic remedies have you found most useful in the treatment of the following conditions:—

1. Acute rhinitis?
2. Vaso-motor turgescence of the nasal mucous membrane and hay fever?
3. Chronic nasal catarrh?
4. Acute empyema of accessory sinuses?
5. Chronic empyema of accessory sinuses?
6. Acute attack of nose bleeding?
7. Recurrent attacks of nose bleeding?
8. Ozena?

Remarks. (Under remarks cite any striking case in which you have found the single remedy to have accomplished re-

sults which you believe could not have been successfully accomplished by any other means.)

The remedies which have been found most useful in the hands of these fifty-one specialists who were kind enough to reply to my letter, are as follows:

*For condition 1, Ars. alb., 20; Aconite, 19; Gelsemium, 18; Allium. cepa, 16; Ars. iod., 15; Belladonna, 12; Camph., 12; Euphrasia, 10; Pulsat., 9; Merc. viv., 7; Nux. vom., 7; Merc. sol., ; Natr. mur., 2; Kali. iod., 2; Arum. tri., 2; Ammo. carb., 2; Bryonia, 2; Sang. can., 2; Merc. iod. cum kali iod., 2; Fer. phos., 2; Aesc. hipp., 1; Sulph., 1; Kali bi., 1; Kali. sulph., 1; Apis, 1; Lachesis, 1; Ammo. mur., 1; China, 1; Merc. dulc., 1; Hepar, 1; Iris. versicol., 1; Chinin. ars., 1; Cham., 1.

For condition 2; Arsen. iod., 17; Allium. cepa., 10; Euphras, 9; Arsen. abl., 9; Sabadilla, 7; Gels. 6; Ambrosia, 5; Naphtalin, 5; Sang. can, 3; Arundo. mur., 3; Puls. 4; Psorinum, 3; Bella., 3; Kali iod., 3; Nux. vom., 2; Kali. bi., 2; Lobelia, 2; Sang. nitr., 2; Ipecac, 2; Sulph., 2; Kali. mur., 1; Wyethia. hel., 1; Silica, 1; Carbo. veg., 1; Lycopodium, 1; Hydrastis, 1; Ammo. mur., 1; Merc. iod., 1; Nit. acid., 1; Calc. carb., 1; Lemna. minor., 1; Chin. ars., 1; Arum. tryph., 1; Bella., 1; Hydrastin, 1; Bryonia, 1; Eupat. perf., 1; Camph., 1; Lacthesis, 1; Ragweed pollen, 1; Iodin, 1; Melilotus, 1; Artenafola, 1; Crom. al., 1; Pothos. foet., 1; Hepar. sulph., 1; Natrum. sulph., 1; Cuprum. acit., 1; Macrotin, 1.

For condition 3, Kali. bichrom., 22; Hydrastis, can., 15; Puls, 15; Calc. carb., 11; Sulph., 10; Psorinum, 5; Hydrastin, 5; Ars. iod., 5; Sanguin. can., 5; Merc. sol., 4; Kali. muriat., 4; Lemna minor., 4; Hepar sulph., 3; Sang. nit., 3; Merc. prot., 3; Merc., 3; Thuja, 2; Merc. iod. rub., 2; Silic., 2; Phosp., 2; Sepia, 2; Kali iod., 2; Graphites, 2; Calc. phos., 2; Merc. cor., 2; Nux vom., 2; Argent. nit., 2; Calc. ostr., 1; Ammo. carb., 1; Myrtus. chek., 1; Tub. 1; Lycopod, 1; Kali. sul., 1; Nat. mur., 1; Elaps, 1; Merc. viv., 1; Luesinum, 1; Hydrastis, locally, 1; Calc. sulp., 1; Mag. phos., 1; Spigelia, 1.

For condition 4, Hepar, 16; Bella., 13; Puls., 7; Bryonia, 7; Kali bi., 6; Aconite, 6; Gels., 6; Ars. iod., 3; Merc. sol., 3; Merc. viv., 3; Arnica, 2; Calc. carb., 2; Merc. cor., 2; Ars. alb., 2; Kali. iod., 1; Silic., 1; Sang. can., 1; Caps., 1; Urotro-

*The figure suffixed to the remedy, indicates the number of physicians using the remedy. In other words, after Condition I, Arsen. Alb., 20; would indicate that twenty of the fifty-one specialists have used Arsenicum Album for Acute Rhinitis. In arranging the lists I have put the remedies in the order of their popularity.

pin, 5 grs., 1; Ptelia, 1; Hydrastis, 1; Euphrasia, 1; Cinnabaris, 1; Tart. emet., 1; Ignatia, 1; Phos., 1; Calc. sulph., 1; Sulph., 1; Kali. mur., 1; Rhus. tox., 1; Spigelia, 1.

For condition 5, Silicea, 14; Hepar, 6; Kali. bi., 5; Sulph., 3; Calc. carb., 3; Puls, 3; Psorinum, 3; Calc. iod., 2; Kali. iod., 2; Nitric ac., 2; Aur. met., 2; Merc. sol., 2; Merc., 2; Phosph., 1; Kali. mur., 1; Syphil., 1; Urotropin, 5 grs., 1; Baptis., 1; Merc. iod., 1; Bryonia, 1; Iris, 1; Bell., 1; Nux. vom., 1; Hydrastin, 1; Spigelia, 1.

For condition 6, Bella., 12; Ham., 9; Phos., 5; Arnica, 4; Millefol, 3; Bryonia, 3; Geranium, 3; Acon., 3; Ammo. carb., 2; Fer. Phos., 3; Chin, 1; Ferrum, pic., 2; Sulph., 1; Melil., 1; Merc. sol., 1; Ant. crud, 1; Bursa pastoris., 1; Carbo. veg., 1; Achillea., 1; Glonoin., 1; Erigeron, 1; Cinnamon, 1; Gels., 1; Causticum, 1; Hydrastin, 1; Trillium, 1; Ferrum. met., 1.

For condition 7, Phos., 5; Carbo. veg., 5; China, 5; Ham., 5; Bella., 4; Bryon. alb., 4; Lachesis, 3; Acon., 2; Geranium, 2; Hydrastin, 2; Ferrum pic., 2; China, 1; Nat. sul., 1; Nitr. acid., 1; Ammo. carb., 1; Mag. carb., 1; Puls., 1; Merc. viv., 1; Glonoin, 1; Ipecac, 1; Aquilla, 1; Nat. mur., 1; Ferr. phos., 1; Gels, 1; Nux. vom., 1; Rhus. tox., 1; Secale, 1; Melilotus, 1; Crotalus hor., 1.

For condition 8, Sulph., 12; Kali. bi., 10; Aurum. met., 9; Psorium., 8; Kali. iod., 8; Merc. viv., 5; Silica, 5; Puls., 5; Nitr. acid., 5; Calc. carb., 5; Alumina, 3; Graphites, 3; Merc. iod. rub., 3; Merc. cor., 2; Aurum. mur., 2; Phos., 2; Calc. iod., 2; Kali. mur., 2; Hepar. sulph., 2; Nat. carb., 2; Nat. ars., 1; Calc. fluor., 1; Kali. phos., 1; Lach., 1; Hydrastis, 1; Prot. iod. merc., 1; Luesinum, 1; Merc. sol., 1; Ars. iod., 1; Aurum. et. nat. mur., 1; Arum, triph., 1; Acid. phos., 1; Nat. mur., 1; Ferrum, 1; Bacillinum, 1; Arg. nit., 1; Syphilinum, 1.

GLYCERIN: PERNICIOUS ANEMIA.—Vetlesen, (*Norsk. mag. f. Laegevid.* No. 10, '09,) in referring to a previous case of pernicious anemia, where a positive cure was obtained by the internal use of glycerin, gives a second case (Public Hospital of Christiania) where the therapy and its results were identic. In the course of 2½ months, hemoglobin rose from 20% to 90%; the erythrocytes from 990,000 to 4,760,000 and the weight from 46.5 kilos to 58.2 kilos. The medical treatment was: A teaspoonful of glycerin with a little lemon juice, t. i. d.

ELAPS CORALLINUS.

BY

D. NILO CAIRO, M. D., CURITYBA, PARANA, BRAZIL.

I. CLASSIFICATION.

Kingdom, animal; sub-kingdom, artiomorpha; type, osteo-zoa; sub-type, oviparum; class, reptilia; order, saurii; sub-order, ophidia; family, colubridae; sub-family, elapinae; genus, elaps; species elaps corallinus.—(Neuwied, 1820).

II. SYNONYMS.

Elaps corallinus, NEUWEID, (1820); *Elaps ornatissimus*, JAN, (1858); *Elaps riisii*, JAN. (1859); *Elaps bocourti*, JAN. (1872); *Elaps circinclis*, COPE, (1876); *Coral viper*; *coral snake*; *cobra coral*.

III. HABITAT.

This snake is found quite frequently in the woods of all the States of Brazil, and inhabits also the whole of tropical South America and some of the lesser Antilles (St. Thomas, St. Vincent, Martinique, Trinidad).

IV. DESCRIPTION.

This is the most beautiful venomous snake of Brazil; its colors are more brilliant and more agreeably combined than those of any other serpent in this country.

Its head is small, not distinct from the neck, covered with large, polygonal shields; the eye is round and small, measuring two-thirds to three-fourths its distance from the mouth, with vertical elliptic or sub-elliptic pupil; nostril between two nasals; no loreal; maxillary very short, extending beyond the palatine, little dilatable, with a pair of large poison-fangs with obsolete grooves; pterygoid teeth few or absent; mandibular teeth subequal. No postfrontals; praefrontals meeting or narrowly separated on the median line. Rostral broader than deep; frontal a little broader than the supraocular, once and a half to twice as long as broad, as long as its distance from the end of the snout, a little shorter than the parietals; latter as

long as their distance from the internasals; one prae, and two (rarely one) postoculars; six upper labials, third as large as or a little larger than fourth, third and fourth entering the eye; three or four lower labials in contact with the anterior chin-shields, which are shorter than the posterior.

The body is cylindrical, of about two feet and a half in length, rather large in proportion to the head and ends in a short and sharp tail. The upper part is covered with smooth rhomboidal scales, with pits, in 15 rows; ventrals rounded, 179-231; anal, divided; sub-caudals 30-47 in two parallel rows or partly single, partly in two rows.

Its prevailing color is a beautiful vermillion-red, which is interrupted at regular intervals by black annuli edged with yellow or greenish-white. These edges and all the red interspaces are more or less profusely spotted with black stitches in the top of the scales. The anterior half of the upper part of the head and its anterior shields are of a bluish-black; from the occipital shields departs a band of a yellow or greenish-white color, which runs behind the eye and colours the shields of the jaws. These shields are separated from each other by black lines. Behind the occiput is the first colored ring of the neck, which is black. Generally the tail is not red, rather black with eight whitish annuli and a short and white top.

There are two varieties of this species of *Elaps*.

One has 21-31 black annuli on the body; and the black dots on the red areas may be so crowded together near the yellow borders of the annuli as to form additional annuli. This variety is found not only in Brazil, but also in the whole of South America and some of the lesser Antilles.

The other variety is found only in Brazil and it is from its fangs that has been extracted the venom, which MURE used in his provings. This variety has 15 to 20 black annuli on the body and not additional annuli as the first one; it must be preferred by our homœopathic chemists.

The coral viper is seldom found in uncovered ground; yet sometimes it is seen in middle of the ways and even in the proximities of the habitations; ordinarily it prefers the bushes, the fresh and humid woods, the ground covered with shrubs, where it may hide itself under the plants and fallen leaves. It feeds on the small animals and birds, which it takes through the branches of the shrubs.

It is ovovivipare.

V. PART EMPLOYED: VENOM.

The venom of *Elaps corallinus* is slightly yellowish, almost colorless, little soluble in distilled water, soluble in glycerine, insoluble in alcohol and ether and, when dry, in pure glycerine.

VI.—PREPARATION FOR HOMŒOPATHIC USE.

For homœopathic use, the venom of *Elaps corallinus* may be used in liquid, as soon as it is collected from the fangs of the snake, or dry, after evaporation.

It may be used then in two forms: the liquid form, by dilution of the poison in pure glycerine, and the solid one, by triturating the poison with sugar of milk.

In the liquid form, the venom of *Elaps corallinus* must be always employed fresh, because, when dry, it is insoluble in pure glycerine; we dissolve one part by volume of the venom in nine parts by volume of pure glycerine, and we have so the mother-tincture of the *British Homœopathic Pharmacopœia*; for making the three first centesimal dynamisations we should prefer again, as a menstruum, the pure glycerine; for the fourth and fifth, a mixture of one part of glycerine and three parts of *proof spirit* (see *British Homœopathic Pharm.*); and for the sixth centesimal and upwards *spirit twenty over proof*.

In the solid form (the trituration) the venom may be employed liquid or dry: if the venom is liquid, the first potency is made by triturating a minimum of the poison with 9 or 99 grains of sugar of milk (according to the decimal or centesimal scale); if the venom is dry, the first attenuation is prepared by triturating one part by weight of the poison with 9 or 99 parts by weight (according to the scale) of sugar of milk. All following dry dynamisations are made according to our pharmacopœias.

From the third centesimal attenuation, conversion of the trituration into liquid potencies may be made; but here again should be used, as a menstruum, that employed for the fourth, fifth, liquid one, and only from the sixth upwards should be used the *spirit 20 O. P.* of the *British Hom. Pharm.*

MURE and LIPPE used, in their provings, the pure venom extracted from the snake fangs; then the medicine *Elaps corallinus* must be not confused with the *Fel Elapidis corallinus* of S. B. Higgins, whose pathogenesis has been obtained by a

proving with the gall of the snake and may not be joined with that one.

VII. DOSE.

Elaps corallinus should be used from the third decimal potency upwards; in tablets, if trituration, or in drops in distilled water as a vehicle, if tincture. From the sixth centesimal upwards the globules or disks may be used.

The sixth attenuation is mostly used.

VIII. PATHOGENESIS.

Sources of the materia medica of Elaps Corallinus.—The principal contributions for our knowledge on the pathogenetic effects of the elaps venom are two:

The first is the article on *Elaps corallinus of the Doctrine de l'Ecole de Rio de Janeria et Pathogenesic bresilienne*, of DR. MURE, which contains the symptoms obtained of two provings made with the third dynamisation of the venom; one of these provings was made on a woman.

The second is a paper of DR. LIPPE, published in the 61th volume of the *Allgemeine Homöopathische Zeitung*, which contains the symptoms obtained on a woman with the fourth attenuation.

All these symptoms have been joined in a pathogenesis by DR. T. F. ALLEN, in his *Encyclopedia*.

However, CLARK's *Dictionary* give us a pathogenesisy joining to the symptoms of MURE and LIPPE, the symptoms of HIGGINS; but, as HIGGINS used the gall of the snake instead of the venom, his symptoms must not be joined to those of MURE, who used, as we have said, the pure venom from the fangs. Gall is not venom, the two substances are very different.

The bites from *Elaps corallinus* are very rare in Brazil; therefore, there is not, in the medical literature, anything published on the poisonings by this snake, neither on animal experiments. However, its bites are fatal, as it is proved by two poisonings cited by DR. WUCHERER, of Bahia, (Brazil). There are almost no local effects from the bite; but the venom, which is a neurotoxic one, produces rapidly general symptoms—blindness, convulsions, paralyses, copious salivation, lachrymation, difficult breathing, diarrhoea, intense congestion of the nervous centres, albuminous urine, sometimes bloody dregs, etc.

General symptoms.—Complete paralysis of the right side, with inability to rise in the morning. Disposition to faint away; faintness on stooping; faintness with sweat. The right side numb as if paralyzed, from the shoulder to the knee; sensation as though she was attacked by apoplexy; all the blood seemed to stand still and to be collected in the head, with cold hands. Changing position is painful; rheumatic pain, sticking, intermittent.

Mind.—Mental agitation. Reveries in the daytime. Sensation of falling forward, though really quite still. Desire to be alone. Aversion to work. Depression of spirits. Profound ennui. Fearfulness, dread of being alone. Irritable, quarrelsome mood, with mental agitation. Peevish, did not want to be spoken to, even fretful about himself. *He hears what is said without understanding it.* Absence of thought; absence of mind. Complete loss of consciousness, so that time passes by unperceived.

Sleep.—Sleepiness; drowsiness all day, with sleeplessness at night. Sleeplessness, with uneasiness. Uneasy sleep, with frightful dreams; nightmare, with congestion to the head.

Fever.—Chilliness, without thirst, followed by dry heat, burning redness of the face, skin hot, dull headache, with thirst. Dry heat at night, the slightest covering being unpleasant. Sweat and difficult breathing. Mental excitement. Flushes of heat in the face. Profuse cold sweat, principally on the forehead and nape of the neck. Great sensitiveness to cold. Shivering produced by cold water, after a cold drink or dipping the hand into cold water.

Head.—*Vertigo, with tendency to fall forward.* The head falls heavily forward. Fearful pains when inclining the head backwards, ameliorated by bending it forward. Headache on the right side. Headache ameliorated by eating. Violent sticking headache, preventing sleep. Pains in the forehead extending to the nape; frontal headache, weight in the forehead and above the orbits. Very painful constriction in the temples and eyes. Frightful pain in the vertex, as though the brain was loose; inability to hold the head still on account of the nausea. Pain in the occiput, right side. Falling out of the hair. Sensation of rawness of the scalp over the occiput; great itching of the scalp. Sensation as if all the blood were collected in the head.

Ear.—Black and hardened wax from the ear. Serous dis-

charge from the ear. *Discharge from the ear of a yellowish-green liquid, in the morning.* Discharge of blood from the ear. Pinching sensation at the helix and lobe; tearing, itching in the meatus auditorius. Diminished hearing; *long-lasting deafness; crackling in the ear on swallowing; buzzing in the ear; continued buzzing, as if a fly was inclosed in the meatus auditorius.* Ringing in the ears; roaring; strange illusion of hearing; whistling and ringing.

Face.—Complexion high-colored, almost red. Swelling of the right cheek, with small red pimples beneath the skin, followed by large round tetter-like spots. Swelling of the face, especially of the right side of the nose. Redness and swelling under the eyes. Face puffy, with red spots. Right cheek hot, red, with formication.

Eye.—Eyes red and inflamed. Glassy eyes. Swelling around the eyes, which appear sunken in the morning. Blood oozes from the eyes. Extreme sensibility to cold water. Dry, hot burning in the eyes. Feeling of sand in the eyes. Pressive pains about the eyes, with dimness of vision. Red eyelids. Bleareyedness. Difficulty in opening the eyes; desire to shut the eyes. Burning and pricking of the eyelids. Complete blindness. Strong aversion to light; want of firmness of vision. Dimness of vision. Colored appearance before the eyes. Tickling and red streaks on the sclerotica. Lacrymation.

Nose.—Swelling of the nose. Bad smell from the nose. Stoppage of both nostrils; breathing through the mouth. Discharge of white and watery mucus from the nose. Coryza; sneezing. Arterial blood gushes from the nose and ears. Pain at the root of the nose, from the root of nose to the ear.

Mouth.—Swelling of the gums. Black or deep-red tongue. Tongue swollen. Pricking at the tip of the tongue. Watery saliva, viscid, salt. Bitter, salt taste in the mouth. Great thirst.

Throat and neck.—Congestion of blood to the throat; burning within the pit of the throat on swallowing, aggravated by heat, ameliorated by cold. Burning from the larynx to tongue, with desire for fresh air. Pressive constriction in the throat. The passage of liquids is arrested as by a spasmodic contraction of the œsophagus, after which they fall heavily into the stomach. Constriction of the œsophagus. Liquids pass down the œsophagus with a gurgling noise; the solids

turn spirally and fall heavily as the liquids in the stomach. Violent throbbing of the external carotid. Parotid gland painful and twitching. Difficult to turn the head; stiffness. Bruised pain in the sides of the neck. Tension and pressive pain in the nape of the neck.

Chest.—Hoarseness. Cough, with expectoration of black blood and frightful pains throughout the lungs, especially the right lung. Feeling of coldness in the chest, after drinking. Compression of the chest as a corset. Dull pain in the right lung. Suffocative oppression of the chest, aggravated by drinking, eating, and going up stairs. Pains in the walls of the chest, principally of the right side. Violent beating of the heart, with anxiety.

Stomach.—Great hunger and great thirst. Hungry, but unable to eat. Eructations, acidity, nausea and faint feeling. Vomiting, watery, or of ingesta or of green bile, followed by bilious diarrhoea. Swelling of the stomach; very slow digestion, with great thirst. *Fruits and cold drinks lie on the stomach like ice.* Burning in the stomach; drawing in the pit of the stomach. *Weight in the stomach after eating.* Sensitiveness in the pit of the stomach. *Feeling of coldness in the stomach, after drinking water.*

Abdomen and back.—Pains in the abdomen, borborygmi and noisy flatulence. Constriction around the abdomen as by a knot. Colic with urging to stool; diarrhoea; falling of the rectum; constriction of the sphincter; formication at the anus. Yellowish, watery diarrhoea, with borborygmi, and, sometimes, undigested food; black and frothy diarrhoea, bloody diarrhoea. Pain in the back, with chilliness, ice-cold feet and tenesmus vesicae. Pain in the spinal marrow. Violent sticking pains in the whole spine. Violent pains in the lumbar region, extending all around and down to the uterus. Green bilious stools.

Urinary and sexual organs.—Tenesmus vesicae. Pain and discharge of clear mucus from the urethra. Urine abundant, red, thick, with sediment. Albuminous urine. General weakness. Preputial inflammation, with pains in the penis. Weight at the uterus; weight, formication and violent itching in the vagina. White, albuminous leucorrhoea. *Discharge of black blood between the menstrual periods.* Menses advanced. Metrorrhagia of black blood.

Skin.—Pretty large, irregular, yellow spots over the hand

and fingers. Eruption of small red pimples and vesicular, principally on the extremities. Vesicular eruption on the feet. Boils on the arms. Itching of the soles of the feet; itching in some parts of the body. The skin peels off on different parts of the frame.

Extremities.—Cyanosis of the extremities, with reddish spots on them. The arm and hand are swollen, bluish and covered with red spots, as also the right leg and foot. Lassitude in the limbs. Rheumatic drawing pains in the limbs. Cramp-like contractive pain in the shoulder, extending to the hand. Hand congested, blue and as if paralysed. Unsteadiness, want of firmness in the hands. Feeling of paralysis in the right hand. Burning in the hands. Great pain all through the lower extremities. Stiffness and cramps in the legs. Pain and swelling of the feet. Convulsions. Paralyse.

IX. CHARACTERISTICS.

Arthritic diatheses; rheumatic constitutions.

Mental agitation; complete loss of consciousness; so that time passes by unperceived.

Fearful and apprehensive of some fatal disease; fear of being left alone, as if something horrible might happen; irritable about all; angry about one's self; does not wish to be spoken to; at the least contradiction, he gets angry, body shudders, blood boils. NECESSITY OF OSCILLATORY MOVEMENTS.

Drowsiness all day, with sleeplessness at night.

Sensation of following forward, though standing upon one's feet. *Vertigo with tendency to fall forward.*

All the local symptoms, all the pains *are more marked on right side*, or affect exclusively this side.

"*Elaps* is distinguished from the other serpent venoms by the pre-eminent blackness of its discharges and haemorrhages." (DR. CLARK).

PARALYSES, principally on right side, worse after sleep. *Hemiplegia* with coldness of the paralysed side, amblyopia, vertigo, difficult deglutition.

Sensation as if all the blood were collected in the head. *Apoplexy.*

Violent sticking pains in the whole spine. *Paraplegia.*

"*Elaps* seems to cure especially the paralyse of the nerves of the organs of the senses, which are accompanied by chronic

headache; this must be very important in the numerous cases of NERVOUS DEAFNESS, which depends of paralytic conditions of the acoustic nerve." (DR. GOULLON).

Frontal headache, extending from the forehead to the nape, specially on the right side, aggravated when inclining the head backwards, ameliorated by bending it forward.

Diminished hearing; *long-lasting deafness; crackling in the ear on swallowing; buzzing in the ear; continued buzzing, as if a fly was inclosed in the meatus auditorius.* Progressive deafness, preceded or with noises in the ears. Disœcia with redness and swelling behind the ears.

He hears what is said without understanding it.

Dry, black and hard cerumen in the ear, with difficult hearing.

Serous or yellowish-green discharges, like pus, from the ear, principally in the morning with illusion of hearing. *Otitis media suppurativa chronica.* CHRONIC OTORRHOEA.

Haemorrhages from the nose, from the eyes, from the ears, from the lungs.

Dimness of vision; complete blindness. Amaurosis, with headache.

Neuralgia of the right eye, with tearing pains, boring pains, or cutting pains around it. Photophobia. Swelling in the morning. Dimness of vision.

Stoppage of both nostrils, in children; breathing through the mouth. Chronic nasal catarrh, with *bad smell* from the nose. Orasna. Stinking yellowish-green discharge. Pains from the nose to the ear on swallowing. Naso-pharyngeal catarrh.

Oppression of the chest going up stairs; valvular diseases of the heart, with anasarca.

Spasmodic contraction of the oesophagus; the passage of liquids is arrested on swallowing, after which they fall heavily into the stomach, with a gurgling noise; the solids turn spirally and fall heavily, as the liquids.

FEELING OF COLDNESS IN THE STOMACH, WHICH REMAINS SOME TIME, AFTER DRINKING WATER.

Weight in the stomach after eating. Canine hunger, yet unable to eat. *Fruits and cold drinks lie on stomach like ice.* Green bilious stools.

Hoarseness; COUGH with expectoration of black blood, and *frightful pains* throughout the lungs, specially the *right lung*

in upper chest, in the morning, which hinders the sick from raising from bed. Feeling of coldness in the chest, after drinking. Sensation of constriction on the chest as by a corset. *Pulmonary phthisis*, above all on the right side; second stage.

Haemoptysis, water and black as ink.

Discharge of black blood between the menstrual periods. Advanced menses. *Metrorrhagia* of black blood; weight at the uterus; itching in the vagina.

Small red pimples, *which peel off*, and vesiculae on the extremities. Yellow spots on the skin. Dry and SCALP eruptions.

X. THERAPEUTICS.

"Elaps corallinus"—says DR. MURE—troubles profoundly the frame and affects all the organs, the cellular tissue and the organs of the senses; the moral symptoms, which go almost till the extinction of thought, are perfectly according to its physiological action. The humour is angry; there is necessity of agitation, the illusions of hearing are numerous; at last, to close that list unhappily very short, we come at the complete extinction of thought. After these symptoms, must be cited the prolonged deafness, the singular phenomena of deglutition, in which the solid food comes down spirally to fall heavily in the stomach, the green bilious stools, the frightful pains on the respiratory organs, and at last those cramplike contractive pains, those congestions of the limbs, which resemble those from *Crotalus terrificus*.

"The number of symptoms, which I have collected, is not very considerable, but I am responsible for their reality. Almost all these symptoms were obtained on several persons; some of them have been confirmed by the clinic, as, for example, the oppression coming up stairs, the vesicular eruption on the feet and the *deafness*. The latter is very important, because it agrees with one of the affections most rebellious till now to homœopathic treatment. The *pulmonary diseases* will find perhaps also a desirable supplement in the *coral-venom*. The haemoptysis and the conditions of the digestive organs indicate it, specially in the *second stage of pulmonary phthisis*. The *madness* and the *cutaneous eruptions* will also be two indications for it. Its special action on the *right side*, the *paralysis*, the *pains* seem worthy of our attention. The *turning movements*, the *necessity of oscillation*, the *desquamation of*

the skin and some symptoms of the mind are remarkable characteristics."

Bilious remittent fever.—Dry and burning tongue, burning larynx with necessity of fresh air in mouth, great thirst; vomiting of ingesta or of green bile and bilious diarrhœa, sensitiveness in the pit of the stomach pains in the abdomen, borborygmi, noisy flatulence, colic, fever, headache, prostration. (DR. VINCENTE MARTINS).

Cataract. (DR. MURE).

Cough of consumption. (DR. HITCHMAN).

Cerebral congestion.—Face puffy, with red spots; eyes injected; dimness of vision; buzzing in the ear; vertigo; headache. Sensation as if all the blood were collected in head. (DR. PEDRO ERNESTO).

Chronic naso-pharyngeal catarrh.—When there is expulsion of green crusts and bad subjective smell, MOFFAT says that *Elaps c.*, is almost a specific remedy.

Chronic suppurative otitis media.—"Elaps corallinus—says DR. H. C. HOUGHTON—is indicated in the chronic suppurative form of otitis media, complicated with naso-pharyngeal catarrh; the posterior wall of the pharynx covered with crusts, or mucous membrane fissured; nasal mucous membrane in same condition; external meatus full of offensive yellowish-green discharge, which stains the linen green; membrana tympani usually perforated. Subjective symptoms: congestive lancinating occipital headache, aggravated by motion and stooping.

"*Elaps* is a valuable remedy in the case of children: the mucous membrane of the posterior wall of the pharynx cracks, or is covered with dry crusts; *the nares are obstructed*, crusty, so that the child has what the old nurse calls *snuffles*, and, when sleeping, *breathes with the mouth open*. The discharge from the ear is thin, somewhat irritating, staining the bed clothes on which it chances to fall; of a clear green color."

Chronic pharyngitis and Chronic rhinitis. (DR. CLIFTON).

Diarrhœa.—Colic with urging to stool; borborygmi; noisy flatulence; constriction around the abdomen as by a knot; constriction and formication at anus. Stool watery, yellowish, bilious green, with, sometimes, indigested food or black blood; frothy diarrhœa. (DR. VINCENTE MARTINS).

Ear (diseases of).—"The snake-venoms—says DR. R. T. COOPER—possess a very decided action in my opinion, upon the

internal ear, and *Elaps corallinus* more pronouncedly than the other members of this group of remedies." DR. GOULLON thinks that *Elaps* is indicated in the paralyses of the acoustic nerve with chronic headache specially on the right side. "As to the diseases of the ear—he says—curable by *Elaps*, they are frequently associated to an otorrhœa or succeed to it; when the discharge is present, it disappears with the other symptoms. Besides, these diseases of the ear are associated also to subjective noises. Then *Elaps* agrees to the progressive dyscoia of Weber-Liel, of which it will be a remedy." "*Elaps corallinus*—says DR. BERNSTEIN—in my opinion, is the more valuable specific remedy in deafness. In my hands, it cured two cases of paralysis of the acoustic nerve; some other homœopaths have reported like cures in the *Journal de la Societe Galicane*." There is then diminished hearing; long-lasting deafness; crackling in the ear on swallowing; buzzing in the ear; continued buzzing, as if a fly was inclosed in the meatus auditorius; ringing in the ears; roaring; strange illusions of hearing; whistling and ringing. In the obstruction of the meatus auditorius by excessive hard and dry black cerumen, *Elaps* is also the indicated remedy. Some eruptions with crusts on the ear, extending to face, and mucous discharge and itching, will find in *Elaps* their remedy.

Eyes (diseases of).—Blepharitis and conjunctivitis are two indications of *Elaps corallinus*: the eyes are red and inflamed, with a dry and hot burning and a feeling of sand within; pressive pains about the eyes; red eyelids. Neuralgia of the eye with tearing pains or boring pains, as from an incision around the right eye, photophobia and swelling of the eyes in the morning, the whole preceded by headache on forehead and occiput. (DR. GOULLON). Amblyopia and amaurosis. *Gastro-enteritis*. (DR. PEDRO ERNESTO). See *Characteristics* and *Pathogenesis*.

Heart (valvular affections of).—In *L'Art Medical*, of Paris, Vol. XX, a case is reported of valvular affection of the heart in stage of a systolia and anasarca, which was ameliorated under *Elaps*.

Intermittent fever of type quotidian, from 7 to 10 p. m. Chill without thirst; followed by dry heat, burning redness of the face, skin hot, dull headache, with thirst; heat alternating with chilliness; profuse cold sweat, principally on the forehead and nape of the neck. (DR. ALLEN).

Leucorrhœa. (DR. MURE).

Lypemania.—Mental agitation. Desire to be alone; fearfulness, dread of being alone. Irritable, quarrelsome mood, peevish. He hears what is said without understanding it. Absence of thought. Complete loss of consciousness. (DRS. VINCENTE MARTINS and PEDRO ERNESTO).

Menses.—Preceded by uterine colic, compelling her to make a movement of oscillation of the body to ameliorate it. (DR. AZEVEDO MAIA). See *Characteristics*.

Oesophagismus. (DR. MURE).

Pleurodynia.—On the right side, upper chest. (DR. MURE).

Pulmonary phthisis.—See *Characteristics* and *Pathogenesis*.

Skin (diseases of).—Dry eruptions peeling off on the extremities, with itching. Humid eczema on the feet, very pruriginous.

Uterine cancer.—Pains in the lumbar region, extending all around and down to the uterus; general weakness; weight at the uterus; weight, formication and violent itching in the vagina, extending to abdomen and epigastrium; *metrorrhagia of a black blood*. (DR. HERING).

INDICATIONS FOR OPENING THE EAR DRUM.—1. Earache is but a warning of perhaps dangerous disease, the pain of which may be masked by opiates to the ultimate risk of the patient's life.

2. If the drum-head be much reddened or bulging, or if fluid be detected or if the earache be very severe and not relieved by general and local treatment within 24 hours, it is advisable to incise the membrane at once before it bursts, as the character, location and extent of the tissue-destruction is thereby limited.

3. Pain is relieved at once by a free incision, the course of the disease is shortened, the symptoms mitigated, and sequelæ prevented by this and appropriate after-treatment.

4. If the case be seen after spontaneous perforation, the hole in the drum-head will often be found to be too small or poorly adapted for proper drainage, and it may be advisable to enlarge it by a free incision.

5. The little operation gives but temporary pain, and if the physician does not make too much of a show, will be tolerated by any patient, who will be thankful for the relief afforded his symptoms.

6. Meddlesome after-treatment should be discouraged, as when the diseased part is protected from further infection, and the discharge not too frequently removed, the case will usually run a mild course.—H. V. Wudemann, in *Northwest Medicine*.

EDITORIAL

THE SIXTY-SIXTH ANNUAL SESSION OF THE AMERICAN INSTITUTE OF HOMŒOPATHY.

THE sixty-sixth annual session of the American Institute of Homœopathy was held at the Hotel Maryland, Pasadena, California, July 11th to 16th. It is doubtful whether there has ever been a meeting of the Institute for which more elaborate preparations were made by the laity and by the local physicians, and the many courtesies extended to the members of the Institute will long be remembered by those who were fortunate enough to be present.

The scientific portion of the program was well filled, and many papers of unusual value were presented. It is to the business portion of the work, however, that we desire to call attention at the present time. The election of officers was a closely contested one,—Dr. T. H. Carmichael, of Philadelphia, and Dr. Gaius J. Jones, of Cleveland, Ohio, being candidates for the office of president. The election resulted as follows:—

Honorary President—O. S. Woods, Omaha, Neb.

President—Gaius J. Jones, Cleveland, O.

First Vice President—Walter E. Nichols, Pasadena, Cal.

Second Vice President—Margaret H. Schantz, Reading, Pa.

Secretary—J. Richey Horner, Cleveland, O.

Treasurer—T. F. Smith, New York, N. Y.

The Trustees elected were T. J. Hensley, Oklahoma City, Okla., E. L. Mann, St. Paul, Minn., J. P. Sutherland, Boston, Mass., and James W. Ward, San Francisco, Cal.

Dr. Gaius J. Jones, the president elect, is well known for his long and enthusiastic work in behalf of homœopathy. Dr. Jones was born in Oneida County, New York, on February 27th, 1843. He attended a course of lectures in the Homœopathic Medical College, of Cleveland, Ohio, and in March, 1865, entered upon the practice of medicine. In 1872, Dr. Jones was appointed lecturer on anatomy in the Homœopathic Medical College of Cleveland, and in the following year was

advanced to the full professorship. In 1878 he was elected professor of the theory and practice of medicine. From 1890 to 1897 he was dean of the Cleveland Medical College, and later held the office of dean of the Cleveland Homœopathic Medical College. Dr. Jones has always been an ardent supporter of the principles as laid down by Hahnemann, and his election to the highest office within the gift of the American Institute of Homœopathy is a fitting recognition of his lifelong work to advance the interests of the homœopathic school.

Dr. H. R. Arndt, of San Francisco, Cal., was elected to the very important position of field secretary. Inasmuch as it is the duty of the field secretary to visit various sections of the country for the purpose of creating new homœopathic organizations, and of strengthening those that are already in existence, and also to conduct popular meetings for the purpose of informing the public as to the scope and value of the homœopathic system of medicine, the importance of this office becomes evident. The funds needed to carry on this campaign of propagandism have been raised by members of the Institute. Over \$4,000 was contributed at an enthusiastic meeting held on July 13th, and it is probable that this will be added to in the near future.

The question of endorsing the Owen bill, which is now before Congress, providing for the formation of a Department of National Health, was the subject of considerable discussion. A large number of members held that the purpose of the bill was to create a medical trust under the domination of the leaders of the American Medical Association. They contended that the Institute should favor any measure calculated to improve the national health, but should oppose all efforts on the part of one school of medicine to take under its own control the medical affairs of the nation. After long and spirited discussion, the following resolutions were adopted:—

“WHEREAS, the question of the formation of a Department of National Health has been publicly agitated, and

WHEREAS, several bills looking to this end have been introduced into the national legislature, and

WHEREAS, we realize that proper health legislation is desirable and in the direction of the sanitary progress of the age; therefore be it

RESOLVED that the American Institute of Homœopathy in annual convention assembled at Pasadena, California, July

11th to 16th, 1910, does emphatically protest against the passage of the Owen, Mann, Creagor, and other bills now pending;

RESOLVED that we heartily commend health legislation and not medical legislation;

RESOLVED that the President of this Institute be directed to appoint a committee of three, of which Dr. James W. Ward shall be chairman. This committee shall be empowered to draft a bill for the formation of a Department of National Health and to submit same to Congress, and to take such additional action as may favor legislation acceptable to the American Institute of Homœopathy;

RESOLVED that the Secretary be instructed to send a copy of these resolutions to the President and to each of the Senators and Representatives in Congress."

The attendance at the meeting was not large, but on the whole very satisfactory considering the distance to be traveled to reach the place of meeting. Almost two hundred new members were proposed and elected.

It was decided to hold the next annual session of the Institute at Narragansett Pier, Rhode Island.

THE NEED OF UNIFORM ENTRANCE REQUIREMENTS FOR MEDICAL SCHOOLS.

THERE is a great diversity in the requirements of the State Boards of Medical examiners as applied to the educational qualifications necessary for admission to medical schools. Some States require that candidates for a medical license shall have completed a four years course in a high school before entering upon his medical studies. Many States require only two years of high school study, while in others the preliminary requirements are lower still.

A great deal of confusion and unjust criticism of medical schools has arisen because of this lack of uniformity in preliminary requirements; for example, a college situated in a State where the law requires four years of high school study as preparatory to the medical course may refuse to enroll students who cannot comply with the law of that State. If a student from another State in which the required preliminary

education is only one or two years of high school instruction is refused admission by such a college on the grounds that he does not measure up to the entrance requirements of the State in which the college is located, he may reply that it is his intention to practice medicine in his native State and, therefore, it is unnecessary as far as he is concerned that he should measure up to the requirements of the State in which the college is situated. Should the college accept him as a student under these conditions, it is very likely to be bitterly criticised in future years. Experience has shown that many students that enter college with the idea of practicing in a certain State or community are induced to alter their plans for various reasons, and should this occur in a case such as we have just cited, the student is prone to unjustly criticise his Alma Mater when he finds after he has received his degree in medicine, that he is ineligible for medical licensure in the State in which the college is situated because his preliminary requirements are not satisfactory to the Examining Board.

It would, therefore, appear that the only proper policy for a medical institution to pursue is to demand that all students who desire to matriculate for medical study should comply strictly with the preliminary requirements of the State in which the college is situated. This not only tends to elevate the standards of medical education, but also insures to all graduates of the institution the opportunity to obtain a medical license in the State in which they receive their medical education.

TREATMENT OF CHRONIC CYSTITIS IN THE MALE.—H. M. Christian states that cystitis due to infection by the colon bacillis results in an acid urine and requires the internal administration of an alkaline diuretic, such as citrate of potassium, together with the free use of alkaline mineral waters. If the urine is alkaline some urinary antiseptic is indicated, among which, in the order of their value, are urotropine, sodium salicylate, sodium benzoate, salol and boric acid. By far the most important measure in chronic cystitis is the irrigation of the bladder with potassium permanganate, 1 to 8000, or silver nitrate, 1 to 8000. The bladder is washed out repeatedly with this solution, and a small amount is allowed to remain when the catheter is withdrawn.—*Therapeutic Gazette.*

GLEANINGS

INFLAMMATORY AND TRUE CHOLELITHIC JAUNDICE.—Icterus, accompanied by gallstone colic, indicates, as a rule, that the stone is in the ductus choledochus (true lithogenic icterus),—in only 10% of cases is it found in the gall-bladder or ductus cysticus. The jaundice cannot be derived, by resorption from the bile found in the bladder, but is due to the extension of an inflammation from the bladder or the cystic duct to the deep biliary passages of the liver. These cases of “inflammatory icterus” are not uncommon, and should be operated at once, so that the stone may not be driven onward into the choledicus, but, the patient in whom the colic and the jaundice (true lithogenic) appear together in the first attack, is not to be operated, except when the infection is particularly serious, as the attack may end in “spontaneous” cure. Contrary to former views, it should be noted that the gall-bladder in about 80% of the first attacks of colic, contain no bile, but serum or serous pus.—Dr. Riedel, (*Deutsche med. Woch.*, No. 8, 1910.)

VEGETARIANISM.—In the *Archiv. f. Verdaunngskrankheiten*, Bd. XV., H. 5, Yukawa reports his investigation of 200 old people (the Japanese bonzes) with regard to the kind of food eaten as a factor in their longevity. For decades 46% of the bonzes have lived upon rice, barley, herbs, vegetables, pickled radishes, etc.—a most meagre diet. Yukawa chose twelve bonzes, whose diet, since infancy, had been entirely vegetarian, as subjects for experimental purpose and study. He arrived at the following conclusions: The nutritive value of the food was, in scale, the lowest, when compared with that used by any other nation or class, yet sufficient to keep the organism of the bonze in health and able to work,—due largely to habitude, congenital adaptibility (a point to bear in mind when fooling with dietaries, *id est, festina lente*)—and, furthermore, due to the digestive organs, which demonstrate that even with a small portion of albumin and fat as intake, the human economy is able to hold its metabolic equilibrium if only the calories ingested are quantitatively enough.

AEROPHAGY.—In six cases of air-eating (air-swallowers), organic gastric lesions were present. In aerophagic patients the habit is easily explained by their desire to get relief from the pressure upon the cardia and the unpleasant sensation of bloatedness, by eructation. Unwittingly, this is done so that air is swallowed, of which they relieve themselves by abdominal pressure, imagining that thus they are rid of the wind, or gas, in the stomach. The vigorous eructation gives transitory relief, and the process is repeated whenever the cardiac pressure is felt, so that air-eating becomes habitual, and is indulged in finally even without provocation. Later, nervous troubles often combine with the gastric disturbance, though aerophagy, purely hysteric in genesis, also exists. Treatment should include

both neural and gastric conditions. The writer recommends the use by the patient of a cork, which as soon as the attack begins, is to be placed between the molar teeth, the patient meanwhile breathing deeply. In this way, aerophagy is hindered, as deglutition is impossible when the mouth is open.—Dr. Vogelius (*Hospitalstidende*, No. 44, '09).

THE PHYSIOLOGY AND PSYCHOLOGY OF SLEEP.—Tromner, in No. 8 of the *Muench. med. Wochenschrift*, 1910, after study of the literature, his own observations and experiments, and the various biologic relations and symptoms of sleep, arrives at the following conclusions: 1. Sleep is the organism's phase of assimilation essential to the continuity of complicate vital processes and forms. In the young this phase signifies growth, apposition; in adults, regeneration, i. e. removal of the waste products of fatigue and restoration of the supply of energy (by food-stuffs and oxygen). 2. The functional differentiation between the conscious state and sleep increases, in biologic evolution, with cerebral development. 3. In the higher animals, the cortex of the brain is the organ most imperatively needful of regeneration and, hence the one most profoundly asleep. 4. This functional rest or recuperation is attained, first, by a general sensory inhibition, and secondly, by motor and secretional inhibition. 5. The organ of such inhibition can be neither cortical, spinal, or bulbar, but probably the thalamus-opticus, as suggested by its sensorial central location as well as by the clinically and psychologically evident antagonism between sleep and the processes of the conscient state. 6. The primal causes of sleep are neither fatigue nor vaso-motor changes, but an instinct-like vital process, of which the vaso-motor changes are merely signs. 7. Fatigue, the force of habit, and, in receptive individuals, suggestion are factors provocative of sleep. 8. The vaso-motor phenomena, the inhibitory factors and the influence of suggestion demonstrate that "the falling asleep" is a complicate but, nevertheless, active functional process. 9. Disturbance of this functional complex, either in general or in some particulate direction, develops the various forms of insomnia.

PYELOCYSTITIS IN CHILDREN AND INFANTS.—In *Geneeskundige Bladen*, S. 14, No. IX, Dr. C. C. de Lange calls attention to a morbid condition, not infrequent in children, but often not recognized because, commonly, vesical symptoms are either absent or of little prominence. When, without tangible cause, a child or infant develops a high fever, intermittent in type, examination of the urine must not be neglected. By the use of a small bottle attached to the genitals by adhesive plaster, urine may be got from the youngest child without difficulty. There will be found some albumin, not microscopically visible on account of the turbidity, resembling a bouillon culture, in the specimen. Microscopically, many pus corpuscles and gram-negative bacteria are present and, culturally, these are either coli bacilli alone, or mixed with the protens vulgaris, staphylococci, etc. The children thus affected are notably pallid (yellowish), weak, without appetite, and with many other, though not typical, morbid phenomena. Now and then symptoms resembling those of a meningitis are observed. Etiologically, the condition is due to incorrect cleansing of the infant after defecation, the caretaker proceeding from behind anteriorly, so that, eventually, even the oxyuris vermicularis may find habitat in the urethra.

Prognosis is rather dubious, for many of these cases are resistant to treatment and inclined to relapse, sometimes, with even the carefullest scientific treatment, resulting in an *exitus letalis*. Treatment consists in the use of Wildunger or Vichy waters, urotropin, salol, hippol or helmi-tol, and, when the vesical symptoms justify it, irrigation.

BLUE LIGHT IN THE TREATMENT OF NEURALGIA.—In an extensive series of cases, Markelow (*Therap. Obosrenye*, '09, No. 23) arrived at the conclusion that red light and blue light stood in relationship to one another similar to that between the cathode and anode of the galvanic current; the blue, anesthetic, analgesic, whilst the red had an irritant, stimulant effect. With these as guiding principles, he used, with excellent results, the red light in the treatment of hysteric anesthetics, and the blue in neuralgias. Usually, the photo-treatment was applied locally by means of the ordinary incandescent of 32 candle power, voltage 220. The more intense the blue of the glass and the nearer its approach to violet, the greater its photo-therapeutic value. The form of the reflector was also a factor of importance, the parabolic mirror, returning the rays in parallel, being the most effective. Treatment was given for fifteen minutes at each session. The use of blue light from a distance, and, hence, free from any disagreeable sensations, is especially indicated in those cases where, because of extremely violent attacks of neuralgia, local treatment was impossible. In fourteen serious, obstinate cases of such neuralgias, where all non-surgical measures had failed and the condition was passing into a chronic stage, the blue light effected rather rapid cure. In many patients, the therapeutic action was remarkably prompt, particularly so when the neuralgia was of rheumatic origin, and in all of the series, the relief afforded was notably long lasting.

CATHETERIZATION IN WOMEN.—Mirabeam, (*Muench. med. Woch.*, 1910, No. 14) calls attention to the fact that while the anatomic relation of the female urethra render catheter technic much simpler than in the male, the danger of carrying micro-organisms from the adjacent vagina and anus is correspondingly much greater. Yet, as demonstrated by numerous experiments, the induction of bacteria into the bladder does not, of itself, excite a cystitis. The chief, and essential, genetic factor in cystitis is trauma in some form or other. The least injury to the mucous membrane of the urethra or bladder is of far greater import than the entrance of a few bacteria, and experience has shown that such lesions are far more apt to follow the use of soft or semi-soft catheters than those made of glass or metal. The glass catheter, easily sterilized by dropping it into a basin or kettle of boiling water, should be exclusively employed in females, and where permanent catheterization is necessary, a glass instrument of the Skene "horseshoe" model.

STRYCHNIN, CALOMEL, BISMUTH.—In the *Wiener kl. Wochenschrift*, 1910, No. 14, is written by K. Chadounsky in review of three articles by as many authors concerning the therapeutic validities of the above pre-historic drugs, sacred by tradition and dosage to the "regular" school. Chadounsky after commenting upon the medicamental chaos in which his associates live and have their being, summarizes the data given by modern

research, unhobbled by tradition or cathedral dicta. Strychnin is curtly disposed of as stomachic and tonic to intestinal musculature, the modern investigator finding it a toxic substance, of very dubious therapeutic action and easily replaced by safer remedies. Calomel, as a cathartic or antiluetic, we may dispense with, as intestinal antiseptic it is without action, instead of its reputed cholagogic effect (cleaning out the liver) there is a less flow of bile, as a diuretic it is contradicted in any renal affection, and what therapeutic virtue it possesses should be invoked only when all other remedies have failed. As to the third drug, bismuth, or its basic salts, modern researches could discover absolutely no therapeutic indications.—*Verba sap.*

AT LAST WE GOT IT.—Dr. G. C. Young, of New Jersey, says in the *Medical Summary* that he has cured numerous cases of cancer, both external and internal by medical treatment. For internal cancer he advises constitutional treatment with a mixture of fluid extracts of *Iris versicolor*, *Phytolacca* and *Rumex crispus*, the proportions varying according to the case. External cancers are treated, in addition to the above mixture, with a paste composed of zinc sulphate 1 oz., powd. blood root, 2 ozs.; and dry flour, $\frac{1}{2}$ oz., applied night and morning. Diluted acetic acid is used to wash the sore, and this acid was administered internally, a teaspoonful every 8 hours on an empty stomach. We are certainly making progress in this direction.

Austin Flint believed that young doctors give too much medicine. A doctor, he said, will give more medicine the first year than in the next three; he will give more the fifth year than the next ten. The better doctor he becomes the less he gives, and I suppose if we would become perfect doctors we would give none.—*Drug Topics.*

HIGH FREQUENCY CURRENTS IN THE TREATMENT OF ARTERIO SCLEROSIS.—Dr. Thomas E. Satterthwaite has obtained excellent results in the treatment of arterio sclerosis by means of high frequency currents.

The method he now recommends is as follows: The patient is first subjected for a few minutes to the light bath, by means of which the blood is brought to the surface, and a sedative effect produced. Then the static breeze may be given. The sliding poles are pulled apart, so that there will be no spark, and the negative side of the machine is connected with the insulated platform by the long brass shepherd's crook, while the positive pole is grounded. The metal standard being placed near, with the crown over the patient's head, the negative electricity streams over his face, so that he feels the breeze. There is also an odor of ozone, which fills the room, the oxygen of the air having been changed to ozone, or, in other words, electrified. This treatment, which is continued for from five to ten minutes, is very soothing and helpful in asthenia. The patient is then subjected to the high frequency current. The plant for this consists of a resonator combined with a d'Arsonval solenoid and adjustable spark gap and a pair of condensers of the Leyden jar type. This apparatus is operated by a static machine of sixteen plates. The patient reclines on a "condenser couch," which is insulated by means of glass feet. Its cushion has on its under surface a fine metal plate, which extends its entire length

and is connected with one pole of the Oudin resonator. The other pole of the resonator is connected with a vacuum electrode, and the fluorescent spark discharge is applied through the clothing of the patient by the operator's slowly moving the electrode over the surface. The seance lasts from ten to fifteen minutes.

It is generally held that the static machine is more sedative and more efficient in other respects than the coil. The powerful waves of the static form of electricity cause short waves of vibration in the capillaries, which do no injury and promote metabolism in a remarkable manner. In Dr. Satterthwaite's experience, a diminution in arterial pressure is the regular sequel to the use of the high frequency current. The seances should not be prolonged beyond the time at which the pressure falls to normal, as this may prove harmful. Moutier has claimed, very properly, that while high frequency currents reduce arterial pressure, they cannot be said to be uniformly effective, as their action may be inhibited by errors of diet and other causes. Though as a rule he was able to secure a reduction in the pressure, in occasional instances this required as many as from sixteen to twenty sittings. The reduction once obtained, however, he claims, can be maintained for as much as three years without relapses. It has sometimes been advised to use the faradic current as an adjuvant. Intestinal atony is often a complication of arteriosclerosis, and here the faradic current, applied over the abdominal walls, may be helpful in relieving the constipation. In addition, Dr. Satterthwaite uses mercury, iodine, iron and arsenic, according to the indications present.—*Monthly Encyclopedia of Med.*

AMPUTATION IN DIABETES.—It is no easy matter to convince a patient, or his friends, even though he knows that he is a diabetic, who has developed a gangrene of the toes, which is creeping up to the dorsum of his foot, that so severe and radical a measure as an amputation above the knee is at once necessary. The pressure to temporize, and at first to try a less radical procedure is almost irresistible. The best interests of the patient, however, surely demand that if any amputation at all is to be done, it should once for all be done above the knee.—Lewis Stephen Pilcher, in the *Long Island Medical Journal*.

FRACTURES OF THE SPINE.—Dr. Carl Sawyer (*American Journal of Surgery*) presents a comprehensive review of this subject which constitutes one of the most serious disorders with which the surgeon has to deal. The symptoms he states are varied according to the extent of the lesion. In a few rare cases they are almost nil. The usual local signs of fracture, such as crepitus, etc., may or may not be present. Some patients suffer pain and some do not. If possible, an X-ray examination should be made, for by it alone can many fractures be located. Sensory and motor paralysis usually appears immediately after the accident. The muscles affected become limp, the reflexes are diminished or lost, incontinence of the urine, and paralysis of the rectum usually appears. Fracture of the first four vertebra usually terminates fatally at once. Fractures of the lower three cervical segments are very serious, but death may not come immediately; cases have been known to live several years after receiving such an injury. Fracture of the thoracic vertebra causes paralysis of the spinal, abdominal

and leg muscles. Patients with this injury may live for several years. The diagnosis can usually be made when we have the history of a fall or blow followed by the sudden development of paralysis. Crepitus, pain or pressure over a given vertebra, and verification by the X-ray makes the diagnosis complete. As to prognosis, the higher the lesion the worse the outlook as to life and to recovery. Many cases terminate fatally within the first four weeks. If the patient survives this time his chances of living are good.

Treatment.—The treatment of these fractures can be divided into two great stages: (1) Early, and (2) Late.

The early stage exists from the time of receipt of the injury to about 6 weeks after. During this period the surgeon must decide:

- (1) What shall be done immediately following the injury?
- (2) Shall operation be performed?
- (3) What fixation methods shall be employed?
- (4) How shall the health of the patient be maintained?
- (5) How shall complications be met?

Much depends upon the immediate care. The patient should be handled carefully on some hard object such as a board or stiff cot. Do not move the broken parts any more than is absolutely necessary. Never have a patient of this kind sit up; if there is much dislocation present reduce it if possible by gentle measures. Get the patient into a firm bed, well supported, and institute measures to combat shock. Defer a complete examination until the patient has rallied. This having been accomplished, the question of operation arises.

Rare, indeed, is the case needing a laminectomy. Anyone who has opened the spinal column will agree that it is a serious and difficult task very unlikely of good results. The X-ray advice is the only safe guide in this stage. If any piece of bone is found piercing the cord it should be removed by surgical measures. As for the removal of the symptoms too much should not be expected; the damage has usually been done beyond immediate repair. Three of our patients were operated upon. None was helped in any way. The patient making the only satisfactory recovery was refused an operation. At least 48 hours should elapse before any surgical interference should be undertaken. This gives the patient time to recover from the immediate shock and for defining the lesion.

A light diet, with abstinence from meats and other bulky foods, is permitted. The patient is encouraged to use the movable parts of the body considerably, unless the fracture is cervical; then only the face muscles should be used.

Complications are numerous and usually serious. First come intercurrent affections. If the lesion is high up pneumonia, due to the disturbed respiratory action is common. It usually proves fatal. One of our cases died in the fourth week from a rapidly progressing form of this disorder. General infection from bed sores always develops. These sores are due more to disturbed trophic actions on the part of the nerves than to pressure. True they always come where pressure is exerted, but they do appear when there is no such cause. They are found low down on the back and over the buttocks, over the upper surfaces of the toes, the heels, the insides of the knees, etc. They are seldom prevented; wrapping in cotton, padding, etc., nearly always fails.

Large pieces of tissue—in one of our cases—nearly a pound—slough out, a dreadful stench arises, and deep ugly cavities result. A diluted mixture of iodine and aqueous calendula serves to keep them in a healthy condition after the dead portions have been removed. Oftentimes after long duration they will heal.

Cystitis, due to the frequent catheterization and to the fact that the membranes of the urinary tract are also undergoing trophic changes, nearly always results. Hexamethylene tetramine and an occasional washing with a return flow catheter and boric acid or Thiersch's solution seem to minimize the dangers from this score.

The bowels in all cases prove stubborn, due to the paralysis caused by the lesion. They should be moved every second or third day. The best way at first is to let the contents pass into the sheet; later, a low bed pan may be used. Few things by mouth result favorably. Calcined magnesia and citrate of magnesia result best. Of late we have used phenolphthalein with good results. One of the best methods is to inject about 2 quarts of a weak methylene blue solution high up in the bowels with a sigmoid tube. Then, with the fingers of one hand in the rectum, and the other kneading the abdomen, gently work the fecal matter away. The methylene blue acts as a satisfactory anti-fermentative.

Frequent sponge baths should be given, care being taken not to disturb the broken parts. After the first week light massages are to be started.

After the sixth week the program should be varied. Electricity, massage, hydrotherapy, phototherapy, supports, attempts at motion and passive movements, are to be commenced. Our plan has been to vary the electrical treatments, using faradism one day and galvanism the next. If the patients still have contractions at this time the faradism should be omitted. All the muscle points in the paralyzed area should be stimulated with faradism and those not responding to faradism should be especially worked upon by the galvanism. Static electricity and the violet ray are both of doubtful use, although we see that each case has these on alternate days.

The chief aim of the massage is to keep the muscles from atrophy, consequently it must be thorough, picking up all fibres involved and reaching to all parts of them. Care should be taken not to bruise the tissues, as this oftentimes produces areas from which sloughing may result. It is best to start with light movements and increase the deeper ones.

The mechanical supports needed depend entirely upon the condition of the patient. We prefer steel braces to any other measures. Plaster of Paris has never given good results in our hands. It is uncleanly, hard to handle and cannot be changed readily to permit examination of the case. In some cases the brace is for the back only; in others it supports the head and is built from the ground up. The essential features are that it supports the patient, fits closely and does not add to the deformity.

It may seem a waste of energy to ask the patient to attempt to move the paralyzed parts, yet it is one of the great measures we possess to regain their use. We make it a practice to require the patient to spend ten minute intervals every few hours in trying to move the useless members. We coach them to move the great toe on one foot, to try to draw the leg up, to swing the foot, etc. After days spent at seemingly useless endeavor we have seen slight movements appear in one of the toes, and in one case we

have seen that grow until the patient is again able to walk with a cane. After the first movement the patient should be told to do others, and as fast as a new one is acquired to push along to the next. Care must be taken, however, that they do not overdo themselves and thereby defeat the purpose they are working for.

Passive movements should be attempted as soon as the fractured parts have united. The arms and legs should be moved regularly about the third week. All the joints should be kept limber and as far as possible the members should be moved through their normal course of motion. By combining the passive movements with the willing for movement on the part of the patient, a great deal may be accomplished. In the event of function being partially restored, the patient should be coached to advance to the normal as rapidly as possible. Perambulators and walking machines ought to be at hand in all instances. Cases of several years standing seldom yield good results. Those taken sufficiently early, however, should be labored with heroically, as oftentimes good results may be obtained when everything indicated that the case was incurable, and he who rescues one of these unfortunate beings from the shackles so rudely thrust upon him has veritably rescued a man from a life of horror and agony and distress.

A PLEA FOR CONSERVATISM IN SOME GYNECOLOGICAL CONDITIONS.—Under this title Dr. James P. Glynn, of Brooklyn, N. Y., enters a strong plea for conservatism in the treatment of infection after child birth and acute gonorrheal salpingitis. Dr. Glynn states that there is a great temptation to be brilliant—to cut something out, and yet his experience demonstrates to him that the conservative treatment is less dangerous and more satisfactory in its results. The treatment which he advocates in such cases is outlined as follows:

Ulcers of the vulva or vagina should be touched with tincture of iodine. If the repaired pelvic floor breaks down and suppurates, the stitches should be removed, and the wound laid wide open so as to drain.

As soon as the patient's temperature reaches 102°, unless there be other fair explanation, a specimen of the lochia should be obtained for microscopical examination, if this be possible. A word here about the gross appearance of the lochia. In spite of all that has been dinned into our ears, in school and out, it is a very common thing for me to be assured by the accoucheur that the lochia were not foul-smelling, as an evidence that the fever must be of other than uterine origin. As a matter of fact, the reverse is almost always true, for in pure streptococcic infection the odor is very little changed from normal.

To resume—the sterilized finger should be introduced and the interior of the uterus gently and thoroughly explored, after which, the appendages should be investigated with the two hands. If the uterine cavity is smooth curettage should not be thought of, but a douche of several quarts of saline solution should be given. On the other hand, if the endometrium is rough and contains shreds, it should be cleaned out with the finger and followed by plenty of saline douching. As has been said, in the severe cases there is nothing to be removed by a curette, and harm is inflicted by breaking down nature's protecting wall of leucocytes; and in the mild

cases where there is much debris the finger can remove it as readily as the curette.

I have said saline douches, because the various antiseptics do not add to the effect and may do damage. The utility of the douche in this instance is purely mechanical. It is not rational to suppose that we get a chemical action penetrating deep into the tissues when the bacteria lie, from the transitory passage of the fluid over the intrauterine surface. If one has to deal with a putrid endometritis, and the symptoms do not yield to the first washing, the douche may be repeated. When the infection has extended beyond the uterus local measures should not be persisted in.

Gonorrheal endometritis needs no active treatment directed toward the uterus until later, as in most cases the temperature does not rise high, and soon falls, the patient recovering or being left with a chronic endometritis and diseased appendages, which can be attended to more properly later.

For the rest, the treatment is expectant and supportive. The most reliable drugs are alcohol and strychnia. Large doses of alcohol are tolerated here. Absolute rest and a carefully selected diet are of course enjoined. Ergot may be used advantageously in conditions of delayed involution.

If parametric abscesses make their appearance they should be incised and evacuated. When pus tubes or ovarian abscesses can be made out by bi-manual examination, they should be removed by laparotomy, if they are movable; or if bound down they should be drained through the cul-de-sac.

A great deal has been written and discussed about hysterectomy, at an early period. This step I have never regarded with favor for two reasons, well expressed by Williams of the Johns Hopkins. He says: "If one operates at a period sufficiently early to prevent the extension of the process to other organs, a large number of uteri will undoubtedly be removed unnecessarily. On the other hand, if we wait till a later period, when other organs have been implicated, the operation will be useless."

When in 1895, Marmorek announced the discovery of his antistreptococci serum, the outlook for these cases seemed brighter, but the usual enthusiasm was succeeded by the usual disappointment, and later experience seems not to have borne out our expectations. There is some hope that our relative helplessness in the face of septicemias of this class may be relieved in the future by the use of auto-vaccines, although I am informed that careful and extensive experiments at the Massachusetts General Hospital and elsewhere have resulted negatively.

The second condition for which I bespeak conservatism is acute gonorrheal salpingitis. It is an almost daily occurrence to have physicians send cases of this kind to the gynecologist for immediate operation, and we have to bear with considerable importunity when we follow a course of wait and sustain, and operate later if necessary, when nature has done its excellent work of walling off, and time has rendered the pus in the sacs less virulent, or in many cases innocuous.

Now the particular phase of conservatism which I favor is in the treatment of these cases when we do come to operate on them. The usual radical exsection of both tubes and ovaries can not be justified in many cases. Briefly, when there is a healthy patulous portion of the tube, next the uterus, shut off from the diseased outer end, when the ovary is healthy,

and the fimbriated end not adherent to it, leave the ovary, amputate the tube at the outer end of the healthy portion, wash it out, slit it up a short distance, and unite its peritoneal and mucous coats with catgut, making an artificial ostium. This, of course, when the age of the woman, and the condition of the Adnexa on the other side render the retention of the ovary desirable. Even if it be necessary to remove the entire tube, the ovary should not be exsected, as a matter of routine.—*Amr. Jour. of Surgery.*

THE CARNEGIE FOUNDATION REPORT.—The medical profession, especially that portion of it engaged in medical-college work (no inconsiderable part), has been much stirred by Bulletin No. IV of the Carnegie Foundation for Teaching, which is the record of a painstaking investigation of the medical colleges of this country, with numerous deductions therefrom. *The New York State Journal of Medicine* seems to voice the general sentiment of the medical press when it says that the author (Mr. Abraham Flexner, brother of Dr. Simon Flexner, of the Rockefeller Institute) "is evidently of the opinion that it is the last word on the subject of medical education and writes in a style of insolent self-sufficiency. Each chapter and page of the book should bear the legend, 'When I open my mouth let no dog bark.' Modesty has not been included in the category of his virtues."

According to Bulletin No. IV there are a few, a very few, merely passable medical colleges in this country, but only one good one, Johns Hopkins. Rush, Harvard, Pennsylvania, Western Reserve and a few others are to be permitted to exist, but most of the medical colleges are condemned in unstinting terms and given over to destruction. The great trouble with most of our schools seems to be that many of them still cling to didactic teaching, and that is anathema to our critic. The laboratory's the thing. There is no education without it, and no adequate provision can be made for the laboratory without access to somebody's millions. Ergo, no medical college is a good college unless some benevolent millionaire has endowed it. Q. E. D.

Medical education is to be standardized by the dollar, if we accept the Flexner deductions. Besides this standard the devoted services of our great medical teachers, the men who ("didactically", of course) have inspired the young men of our profession, and whose very influence has brought about the marvelous change in our schools for the better during the last two decades, counts for nothing.

Suppose we put the same dollar-mark standard upon all educational institutions, by insisting upon the "laboratory" again to the exclusion of all other methods of teaching. Carry this into practice and the cost of obtaining an education will become so high that the "door of hope" will be forever closed to the poor boy and girl, since the small colleges and secondary institutions which exist for this class will be compelled to close their doors. Is there any American who would have the timidity to propose such a money-made aristocracy of higher education?

Are we willing to inaugurate such a dollar standard for admission to the medical profession? If so, who is going to "endow" the boys of small means who have the medical aptitudes?

But is this expensive laboratory instruction absolutely necessary for the

making of good doctors? Admitted that it has great value as preparation for research work, but it is still in the experimental stage so far as its value in preparing men for the actual exigencies of practice is concerned. We agree with the editor of *The Medical Standard* who says that "the ultimate standards will be set by the public and not by the profession." As he forcibly states:

"The public has standards of its own—perhaps it would be more correct to say a standard of its own, which, however, the academicians may scoff at is, has always been, is now, and will continue to be, as long as medical science shall last, the final and indeed the only valid test of professional efficiency; a standard by which the whole function of medicine, in all of its aspects, must justify itself to civilization, or, failing, is stopped from pleading any other laudable attainment.

That standard is the standard of *results*. In the public estimation—and we have ultimately no other bar at which to answer—the old criterion still remains in effect, *cito, tuto, et jucunde curare*. By this touchstone shall all medical agencies be tried, educational agencies among the rest. These schools of medicine which, by reason of poor equipment or careless teaching, cannot turn out men able to measure up to this test, will automatically perish; those whose graduates fulfill this ultimate requirement will endure, even in competition with Johns Hopkins and the University of Pennsylvania."—*Amer. Jour. of Clinical Medicine*.

TREATMENT OF INTESTINAL PROTEIN INDIGESTION.—In order to prescribe a suitable diet for each patient, valuable hints may be derived from an examination of the fœces and tests of the hepatic and pancreatic efficiency. If the patient is making good use of starches and sugars, while fats are fairly well digested, the indications are to cut proteins to a minimum, making cereals and other starches the main reliance. The necessary amount of protein food may be supplied in the form of milk or lean meat. Butter-milk is an excellent article of diet and may be taken freely. Tea, coffee, and alcohol are almost always to be forbidden, and copious drinking of water encouraged.—A. E. Thayer, *Medical Record*.

ETHER IN COCAINE POISONING.—Dr. J. E. Engstad has had occasion to treat a number of cases of cocaine poisoning occurring largely in the hands of dentists. He found that the action of strychnia in counteracting the poison was too slow in dangerous cases, and that the most effective treatment was to administer ether by inhalation. Cases which seemed hopeless were saved by this means. The marked mental excitement is allayed as anæsthesia sets in, and the effects of the poison rapidly disappears. The ether should be administered only to the degree of mild narcosis or even less. It should be given by the drop method.—*Jour. A. M. A.*

CLINIC, ANATOMIC, BACTERIOLOGIC CONTRIBUTION TO PERINAUD'S DISEASE.—This affection was described twenty years ago by Perinaud, who considered it due to an infection from animals. Such an idea prevailed for several years until Gifford denied it. Sixty cases have been reported in all, and while anatomically and clinically at present the disease is better known, its etiology is just as obscure as it was twenty years ago.

The author presents a case which presents some interesting features, and which he has examined microscopically and bacteriologically. When the patient was first seen, the upper lid presented such an enormous swelling that it could not be everted and examined. The microscope revealed an inflammatory infiltration of the tarsus, a finding which contradicts the statement of others, who had denied any participation of the cartilage. During the first period of the disease with the swelling of the lid there was an abundant mucopurulent discharge from the conjunctiva, a fact which is not found in other cases reported. Besides the granular vegetations on the tarsal conjunctiva, the bulbar conjunctiva showed papillary growths which gradually disappeared, while those on the inner part of the lid lasted for a longer time. The cultures obtained from the secretions of the conjunctiva, from the pus of the incised preauricular gland, and the apex of a papillary growth of the conjunctiva showed the presence of streptococci and staphylococcus pyogenes aureus, no other special germ having been observed. Dr. Sealinci, with others, thinks that Perinaud conjunctivitis is not a pathologic entity, but the result of many other affections. In fact, the unilateral polyadenitis on the same side of the eye has been found in trachoma, in streptococci conjunctivitis and in irritation produced by the stinging of an insect.—Dr. Noe Sealinci, *Annals of Ophthalmol.*

WILLIAM SPENCER, M. D.

BACTERIOLOGY OF THE CONJUNCTIVA BEFORE AND AFTER THE EXTIRPATION OF THE LACRIMAL SAC—In chronic dacryocystitis the conjunctiva contains the same germs that are found in the secretion of the lacrimal sac. The pathogenic germs are the different staphylococci, streptococci, pneumococcus, diplobacillus of Morax and Axenfeld, b. Xerosis, Friedlander's b. By removing the sac it was thought that these would disappear from the conjunctiva, a fact which is contrary to the bacteriologic results. Different explanations have been given to explain their presence. Dr. Caldevaro has examined the conjunctiva before and after the extirpation of the sac, has studied the quantity and the virulence of the pathogenic bacteria by making careful cultures, isolating them and inoculating them in the veins and corneal tissues of rabbits.

His researches show that after the removal of the sac in chronic dacrycystitis the non-pathogenic germs increase in number, while the pathogenic ones actually decrease in the conjunctiva and become less virulent if the lids remain open.

If a bandage is used, even after many months from the extirpation of the sac, the germs are apt to acquire renewed vigor and power of infection. The practical deductions from these experiments are that operative acts on the cornea after removal of the sac are very dangerous, if occlusive bandages are used, not only in very recent cases, but also after the lapse of many days and even months. According to the author, all this is due to the stagnation of the tear on the conjunctiva, which fact, with the elevated temperature, favors the growth of bacteria. The tears act mechanically by washing the conjunctiva and transporting its germs through the lacrimal apparatus. Immediately after extirpation of the sac the germs of the conjunctiva become less active, but three or four hours after they possess great virulence. In consequence of this fact, operations for cata-

ract ought not to be undertaken before at least fifteen days, and no occlusive bandages used but the open method. Three times a day the eye ought to be washed with sterile chloride of sodium solutions, which carries away mucous and epithelial detritus and pathogenic germs.

That occlusion of the lacrimal apparatus favors the development of the germs in the conjunctiva the author has proved experimentally on the animals by ligating the canaliculi and infecting the conjunctiva with staphylococcus. The eye, which was left with lacrimal apparatus intact under occlusive bandage showed no pathogenic germs, while the others with occluded canaliculi, developed a very virulent micro-organism.

The extirpation of the lacrimal gland with that of the sac renders the post-operative infection more dangerous, for the absence of the tears renders the conjunctiva a good field for the growth of pathogenic germs.—Dr. Caldevaro, *Annals of Ophthalmol.*

TINCTURE OF IODINE FOR DISINFECTING THE VAGINA BEFORE OPERATIONS.—Chevrier has successfully used this method. He had excellent results and in no case thus prepared was the healing other than by first intention. He therefore regards this method of sterilization as the best thus far devised.—*Abstr. Zentralbl. f. Gyn.*, 1910, 652.

THEODORE J. GRAMM, M. D.

A NEW METHOD OF STERILIZING THE SKIN IN SURGICAL OPERATIONS.—Iodine has received much attention recently in surgery. Grossich has written on the subject and proposed a new method consisting in intentionally refraining from washing the skin before applying iodine tincture. The latter is therefore the only antiseptic used. Comparative tests have shown that the skin absorbs less iodine after washing and contains more germs than when it has not previously been washed. Soap water which has become soiled fills the minute folds of skin and prevents the iodine from penetrating. The author's results seemed to prove his views. In 500 operations no infection from the skin occurred, and over 700 injuries in workmen healed by first intention after the sterilization with iodine.—*Abstr. Zentralbl. f. Gyn.*, 1910, p. 651.

THEODORE J. GRAMM, M. D.

THE DANGERS OF INFUSION OF NORMAL SALT SOLUTION IN ECLAMPSIA.—Sippel has pointed out from his own experience and from the studies of Kowasoye that there are some serious objections to the therapeutic use of subcutaneous salt water infusions in eclamptics having kidney lesions, which do not exist when the kidneys are not materially effected. The latter author has found that when the kidneys are diseased the salt solution subcutaneously injected is not excreted, but is retained in the blood and aggravates the kidney disease and increases the œdema. It would therefore be better to introduce the fluid into the rectum or the stomach. The fluid should also contain but little salt. The less the osmotic pressure is of the introduced fluid the more will it be capable of diminishing the molecular concentration of the blood, and the less irritating will be its excretion through the kidneys.—*Abstr. Zentralbl. f. Gyn.*, 1910, 670.

THEODORE J. GRAMM, M. D.

TO STERILIZE INSTRUMENTS.—Conradi suggests boiling them in sweet oil. The receptacle is filled with oil and heated in the usual manner, and within a few minutes a temperature of 200° is reached, a temperature sufficient to destroy germ life. The oil does not make the instruments slippery. Since the boiling point of fatty oils is from 310 to 320°, the waste of oil is very slight and hence not expensive. Sterilizing by boiling in oil is not only applicable for metal instruments, but may also be used for bougies and catheters. The author regards heated oil as the most reliable means of obtaining absolute freedom from germs.—*Abstr. Zentralbl. f. Gyn.*, 1910, 654.

THEODORE J. GRAMM, M. D.

THE MODE OF ACTION OF SO-CALLED WOUND ANTISEPTICS.—Budinger says antiseptics as conceived by the founders of our modern method of treating wounds is dead, or rather never existed. Germs which have penetrated the tissues can scarcely be affected, and cannot be destroyed by substances acting chemically. The value of antiseptic solutions consists in their being readily prepared in large quantities, remain sterile permanently, and require less preparation than sterilized water produced by physical means. Strong antiseptic solutions have no more value than weak normal solutions. Antiseptic dressings do not disinfect the wound, neither do antiseptic salves and pastes; but antiseptic dressings exert a favorable irritation upon the wound.—*Abstr. Zentralbl. f. Gyn.*, 1910, 652.

THEODORE J. GRAMM, M. D.

INDIVIDUALIZING OPERATIONS ON THE PERINEUM.—Kustner, in his book on these operations, emphasizes a point too often neglected of late, namely that it is entirely wrong to adopt one scheme for operating all cases. Every case should be operated as its peculiarities demand. The denudation should be so executed as the old scar indicates, and the latter is to be excised. Especially characteristic is the lateral location of the laceration, and its lateral prolongation. The tear is usually longer on one side than upon the other, and the denudation should be made accordingly. The author enlarges the discussion by many anatomical considerations, but one important practical fact stands out prominently, namely that a perineum improperly repaired usually tears again at the next birth, whereas experience has shown that if the repair has been based upon indications like those just named, the perineum is very likely to withstand the strain of subsequent deliveries.—*Zentralbl. f. Gyn.*, 1910, 663.

THEODORE J. GRAMM, M. D.

EUPATORIUM PURPUREUM. INTERMITTENT FEVER.—The paroxysms come at different times in the day. Every other day. Chill commences in the back, and then spreads over the body. Violent shaking, with comparatively little coldness. Thirst during the chill and heat. Violent bone pains during the chill and heat.—*Med. Advance*.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY A. LEIGHT MONROE,

Miami, Florida.

THE NEW YORK CONFERENCE.—The Retrospector was fortunate enough to be in attendance upon one session of the Materia Medica Conference held at the New York Homœopathic College during the semi-centennial exercises, commencement week.

The conference brought together a bunch of materia medica men of national reputation and their several talks were interesting and illuminating in the highest degree.

At the session the writer attended, addresses were made by Royal, Dewey, Boyer, Rabe and others perhaps as well known, and the Retrospector could not help wishing that the conference might have been called for some entirely definite purpose. Some talked of how best to study materia medica, some how best to teach it and some the 'secret of successful prescribing.

One speaker divided prescribers into the pathological, the symptomatic and the intuitive, intimating that the most successful prescribers were the intuitive, those great geniuses who seemed to defy all known rules and to jump at the right remedy with quickness and accuracy. Such prescribers, so the speaker said, were Carrol, Dunham, the Allens, Farrington and Herring. This is all true, but these very men were all masters of pathology and symptomatology and all of the ologies that converge to this one point and what seemed intuition was a thorough mastery and cognizance of all intermediate steps that the others of us have to take painfully.

Painstaking and plodding, one by one. The writer can see great good in the inauguration of such conferences annually, each with a definite objective.

The Retrospector is in receipt of a letter from Dr. S. H. Blodgett, of Boston, in which he claims priority in the use of large doses of soda-bicarbonate in the vomiting of pregnancy, claiming that in 1907 he published a number of successful cases followed, a few months later, by a more extended article. We are glad to set this matter right and thank Dr. Blodgett for calling our attention to it.

PSORINUM.—Psorinum is closely allied to sulphur. The patient dreads a bath. The skin has a dingy, dirty, foul look, rough and uneven, scaly. He cannot wash it clean. The general state is < in open air, but skin troubles are < from heat, worse from being covered, worse at night and from heat of bed, and worse in winter. Allen says: "In chronic cases, where a seemingly well selected remedy fails to relieve or permanently cure; when sul. seems indicated and fails to act, think of Psorinum." "Lack

of reaction after acute diseases," "body has a filthy smell, even after bath." "Great sensitiveness to cold air, or change of weather," "All excretions, diarrhea, leucorrhea, menses, perspiration have a carrion like odor." "Dirty greasy looking skin, hair dry, tangles easily."—Dr. Thornhill, *Med. Advance*.

COCCUS CACTI. COUGH.—Worse when waking, at six a. m.; clear, dry and barking; slight expectoration of thick, viscid mucus. Worse an hour after dinner, three p. m.; so violent as to cause vomiting and expectoration of a great quantity of thick, viscous and albuminous mucus.—*Med. Advance*.

THE THERAPEUTICS OF ASTHMA.—Antimonium tartaricum has given me great satisfaction in cardiac asthma. The indications are great rattling of mucus in the chest; the face is pale and anxious, often covered with a cold perspiration; there is threatened atelectasis; the case is serious. Here give grs. iij of the 3x trituration. It can be given quite often, say, every twenty or thirty minutes, till relief. In my hands this has been a most successful remedy. Another remedy for relief as well as cure is glonoin. There are two conditions for which I administer this remedy, and the dose is very different in each case. Let me say, where we have pale face, anxious countenance, poor circulation and all the signs of cerebral anemia, give gtts. i or ij. of a 1 per cent. solution of glonoin. It can be kept up every one to three hours if needed. I have seen nothing that will reach the brain quicker, and change cerebral anemia to cerebral hyperemia, than this remedy. On the other hand, if we are fighting cerebral hyperemia—as shown by red face, hot head, and a bursting, pounding headache—take gtts. x of 3x solution of glonoin, add to 3iv of water, give teaspoonful doses every twenty minutes, as long as needed. Now, it does not matter what the name of the disease—asthma, or what not—if we get the indications above given, as directed, glonoin is one of the certainties in medicine. I have proved it. Lately I met a business man I have known for years. After greetings, he said: "You know how for years I have suffered with asthma, and now I have it no more. I am cured." I said: "What has cured you?" He replied: "I took a small teaspoonful of peroxide of hydrogen in a glass of water morning and evening. I do not take it all the time now, and yet I do not have a sign of the trouble." I have found three other cases, one an old lady between seventy and eighty years old. It has succeeded in these cases. In the case with which I am most familiar, I think its action was that of a gastro-intestinal stimulant and antiseptic. Try it. I have for years made a smoking mixture for asthma. There enters into its composition rose leaves, stramonium herb, belladonna leaves and pot. nit. The smoking of this mixture has been of very great service to many of my patients and friends.—Dr. Jno. Hearn, *Eclectic Medical Journal*, April 19.

HOARSENESS.—Take ten drops of dilute nitric acid three or four times a day in sweetened water. This is excellent for singers or public speakers. For immediate benefit drop three or four drops of the dilute acid on a small square of loaf sugar, allow it to dissolve on the tongue slowly, drawing the air into the lungs over it.—*Ellingwood's Therapeutist*.

MURIATIC ACID.—By C. M. Boger, M. D. Muriatic acid is a powerful and deep acting drug whose symptoms usually come on slowly and in muscular weakness; this is held to be its main indicator.

The mind shows debility by the sad taciturn mood into which the patient falls, while in the body varying degrees of heaviness or weakness prevail. In the occiput it is felt as a sensation, as if it were filled with lead; the tongue is heavy or the thighs may seem too weak to support the body, causing a tottering gait. At times it is so extraordinary that the lower jaw or eyelids droop or the patient slides down all in a heap, in bed. Again he cannot pass urine without an involuntary stool, etc.

This is a weakness which borders closely on, or may even pass into paralysis, and belongs to hydrochloric acid in the highest degree, coloring the whole symptomatology. The full blown picture shows the presence of an intoxication which causes sicknesses of a low grade with disintegrating effects, putridities and scorbutic states, like certain bad types of scarlatina or typhoid.

The mucous membranes show similar effects, first becoming dry and sticky, then hard and shriveled. In bad cases the tongue becomes narrow and pointed and death seems near.

Burning is the most prominent sensation and occurs on the skin oftener than elsewhere. Putrid ulcers with burning and muscular prostration. Very tender, burning piles, in muscular prostration it ranks with *Gelsemium*, *Conium* and *Physostigma*, but they all lack the slow, disorganizing malignancy of the acid. *Baptisia* has it, but always with a more decidedly blunt sensibility or stupidity.

Ailanthus compares with it in scarlatina, but suits fulminating cases with a sparse dark rash and quick death, due to the amount of virulence of the poison. On the other hand the acid develops an irregular petechial rash, showing that the blood is gradually becoming disorganized.

This general picture you must carry in your mind, using it to confirm and round out any particular symptoms you may find. It is a very quick way, but should only be used in differentiating when we have a good knowledge of the general features of the drug. The other is more tedious and systematic, but has usually the greater merit of indicating the constitutional remedy which will sweep everything before it. Both are necessary and should be well understood.

A recent mastoiditis caused by taking cold while having a lateral luxation of the elbow reduced under chloroform strikingly illustrates the former. The pain was peculiar in that it extended backward, with external tenderness over the occiput (*pachymeningitis*) and a gradually increasing deafness. Muriatic acid is one of the small number of drugs having such a pain; then again it corresponds to the relaxed condition which encourages dislocation, but as if to make the choice decisive, the patient had become unduly quiet. One dose of the 50m. made a complete cure and put him in a fine general condition, besides arousing a craving for salt which lasted sometime.—*Medical Advance*.

MATERIA MEDICA OF MENTAL DISEASES.—The opiates proper are to be used as little as possible as they decrease excretions in the very cases where elimination is most necessary. Curiously enough we find the bromides very little used as the inclination is to jump to the more rapidly act-

ing and newer drugs. The bromides have been without question much abused and in each such case are most deleterious and depressant, but in small doses of five grains of the bromide of sodium given from one to four times in twenty-four hours I believe we have a practical similia action which is especially useful in the mental conditions resultant upon nephritic conditions or in conditions in which we have the high tension of the arterial system. I could say much upon the use of bromides in some diseases, their indication and their benefits, but I can say nothing favorable of large doses in any case. Of the other hypnotics which are given at this day we have the paraldehyde which I would not care to use under any condition, and the veronal, trional and sulphonal. Of all these veronal is the least deleterious in affect as a heart depressant and it is unquestionably efficacious in the atheromatous and resultant mentally disturbed cases, acts favorably in minimum doses of five grains and should never, in my opinion, be used in massive doses of from fifteen grains up, for the reason that if it is adapted to the case the five grains will act promptly, while if it is not adapted to the case no enormous dose will be efficient without injury. If it should be deemed best in any discussion of this paper for me to go more in the conditions of my knowledge concerning some of these remedies it might be interesting. The only other remedies of this character which I mention, are trional and sulphonal. The sulphonal is uncertain in its result. I do not like its action except as used in conjunction with trional. Sulphonal five grains, trional ten grains, at a time will often calm the maniacal and leave them refreshed and improved after an eight hour sleep. The trional seems to produce rapid effect, the sulphonal to prolong that effect. Trional used alone or trional and sulphonal together though helpful in conditions of comparative strength and short necessity may prevent, to my mind, metabolism of reaction and defeat our best efforts. I think we may assume that all of these remedies are only splints for the emergency but that if the patient is kept bound to them for any length of time there ensues as a result depression and imperfect metabolism.

To leave the "don'ts" and approach our own armamentarium, I so to speak, "doff my hat" in respect for the possibilities and at the same time bow in humiliation at our neglect of these possibilities. We have been remiss in the proving of these remedies under modern scientific control. We have been remiss in our demand for opportunities for clinical study in State and municipal institutions. Therefore, to each of us as experience comes to him in this field of medical work, the duty is great to contribute his clean cut results to the general treasure house. This my apology for what I offer, and for the touch of clinician rather than of the prover.

Aconite is rarely mentioned as of deep action in cerebral affections, and yet in my work it has proven one of the most useful and reliable of all in my *Materia Medica*. In all immediate results of cerebral hemorrhage from high arterial tension, in cases of hemiplegia, resultant upon sudden intracerebral pressure due to serous effusion, in cases of latent nephritis of atheroma, in the cases of senile arteries with the normal pulse rate—if it ever in these cases is proper to use this term—of 60 when it suddenly rises to 80 or over with cerebral pain, evident aphasia, and threatened coma, Aconite in the third will in a large per cent. of cases modify tension,

favor elimination, preserve for an indefinite time life, and actually perform what almost seems like the miraculous.

Apis is often indicated in cases that go beyond those which would occur to us in thoughts of the "Key Notes," a laxity instead of a tension, a venous turgidity, a muddiness of complexion, a torpor of mind, that reminds you of the over-worked, sympathy lacking mortal, the one who has been called on for so much with so little in return, that nature has given up the struggle and laid down, bringing us cataleptic states, all forms of dementia, even praecox. In the days of incipency, when the human creature has only fallen to his knees and is not yet prone, much may be accomplished. In this remedy never waste your patient's time by prescribing it in cases of high tension, it is whipping the tired horse.

Arnica is often indicated in cases where traumatism has no part but where venous stasis has obtained and when the whole system seems tired and sore and bruised, and indeed it is in a sense traumatism, for the poor soul is often a victim of the mental bruises that hurt far more than the physical and which come as a result of contact with the roughness of an not always kind world.

Arsenicum presents its indications most often in the cases of melancholia with imperfect metabolism, and all that term indicates, 'auto-intoxication, malnutrition, cases all the way from melancholia with agitation to melancholia with stupor, from the restless fear to the slough of despond. Study your provings of Arsenic for the indications, but do not do this without reading between the lines, for arsenic in mental diseases has the symptomatology of the cumulative effects of its action.

Belladonna gives us the sthenic, the menally active, the result of the intoxication that invites hyper-activity of the arterial system and lessened activity of the venous, thus a surcharged cerebral system, the conflagration of the mental town. Here belladonna may stay the disaster, but without it the whole dispatcher's station is destroyed, with ruin all along the line. Don't use it too low, don't persist in using it unless you get prompt results, for without these prompt results you may rest assured you have the wrong remedy.

Glonoine, that remedy that has won us so many laurels in the arterial tension of nephritis in non-mental cases, is strangely disappointing when the mental sphere is entered, and Aconite will take its place with an occasional day of Belladonna as an intercurrent and supplementary remedy which seems to lengthen in these chronic cases the usefulness of Aconite.

Hepar is a remedy which to my mind has a peculiar and remarkable niche of its own. In specific, that is, syphilitic cases, that have gone through the usual mercurial and iodide treatment, only to be aggravated, hepar comes in with wonderful results. And let me here emphasize a belief that is the result of observation, viz: that Hepar will not do this prior to the antispecific gross medication nor will the cases go on to the favorable result with the anti-specific treatment without the hepar. Explain it as we may this experience has been repeatedly thrust before me, and it is my duty to honestly state the observation.

Lachesis and Sulphur hold the field here in the mental disturbances incident to the climateric, their indications are so well known to you and their results often a marvel.—Dr. Benj. Bailey, *Iowa Hom. Journal*, August, 1910.

FOREIGN LITERATURE

CONDUCTED BY E. FORNIAS, M. D.

PEDIATRICS—ORTHOSTATIC ALBUMINURIA.—A boy, 13 years old, says Prof. Hutinel, of Paris, was brought to the hospital because he coughed and because his general condition was not satisfactory. Born at term, raised at the breast, he suffered seven years ago with icterus, and a few years later with purpura, which is sufficient to explain the condition of his liver. After a slight infection contracted a few weeks ago, and which his parents called grip, he commenced to suffer with headaches, severe and frequent.

The child is too large for his age, but he exhibits manifest troubles of ossification; the thorax is flat, the sternum somewhat depressed and there is certain degree of genuvalgum and a flat valgus foot distinctly characteristic.

As the patient coughs, one would first naturally ask himself, is he tuberculous? But auscultation does not reveal any such condition. When he entered the hospital, two days ago, the urine was plainly albuminous, and this albuminuria could be well ascribed to the recent gripal infection; but it was only necessary to put the child in bed, to see 24 hours later that not the least trace of albumin remained, and Dr. Hutinel thinks it is a case of orthostatic albuminuria.

Orthostatic albuminuria has been, in the last few years, the subject of numerous investigations. In effect, we are dealing here with a very curious alteration of the renal function, in which the kidney remains pervious and the urine does not contain any casts, but only a few leucocytes.

The pathogeny of this peculiar variety of albuminuria has been vastly discussed. By turns, it has been called *digestive albuminuria* (because albumin appears often in the urine a few hours after meals); *orthostatic albuminuria* (because a change from the recumbent to the standing position, has sometimes a very striking influence; and *albuminuria by lardosis or scoliosis* (because the vertebral deviations have been frequent in the cases observed). These albuminurias co-existing with a curvature of the spinal column have been explained by an elongation of the renal arteries. Dr. Hutinel has tried to realize these conditions by placing on the back of a lying child, more or less voluminous blocks, so as to exaggerate considerably the lumbar concavity. He did not notice the production of albuminuria, but in a few cases, and always in children whose kidneys had been damaged by scarlatina.

According to Dr. Hutinel these *intermittent albuminurias* should not be attributed exclusively to the imperfect function of any apparatus, but to a trouble affecting the whole organism, to a defective state of the general nutrition.

Children suffering from the so-called *orthostatic albuminuria* are, as a rule, very nervous, sensitive and impressionable to excess; any intellectual work fatigues them quickly, and provokes violent headaches; they are pale, and very often their chest is narrow and their head remains small, contrasting with the normal development of the sub-diaphragmatic part of the body. One frequently observes a certain degree of cardiac ptosis, palpitations, and gastric troubles. These patients are then in a *general state of dystrophia*; among them we find, in some way, a leakage of albumin, but we are unable to exactly explain the mechanism of production of this leakage.

No matter what interest these pathogenic discussions may awaken, the true important point is to know how to trace or follow the orthostatic albuminuria and institute the proper *treatment*.

Children should not be placed under an exclusive milk diet, whose nutritive value is insufficient. It is very important to nourish them well, by giving them at noon some light meat, vegetables, eggs, and feculents. A phosphated or arsenical medication, discreetly administered, may complete the treatment.

A cure at St. Nectaire is excellent. The results, favorable in the *orthostatic albuminuria*, are bad in the albuminuria due to an organic lesion of the kidney, for instance the albuminuria following scarlatina.

Dr. Hutinel sends his little patients to the sea shore, a practice which has given him good results. The sea air stimulates nutrition and the albuminuria disappears rapidly, but it returns when the children go home and persists sometimes for months and even years before its complete eradication.

The quantity of albumin is very variable, and occasionally can reach a high rate.

The essential point is to be convinced that the albuminuria is only one of the elements of a general dystrophia, and that the treatment to be efficacious must be directed to the general condition.—*Journal des Praticiens*.

ARSENICAL KERATOSIS AND ARSENICAL CANCER.—At all the multiple cutaneous manifestations due to the *chronic intoxication of Arsenic*, arsenical keratoderma is the most characteristic and serious. In fact, this keratosis ends in epithelial cancer, just as leucokeratosis of the tongue ends in cancer of this organ.

Prof. Dubreuilh, of Bordeaux, (*Annales de dermatologie*, *fev.* 1910) has given us the elements for the study of this curious cutaneous manifestation.

In the chronic variety of keratoderma, we can distinguish a diffuse and a nodular form which are usually associated, but which can also exist isolated, or follow each other in the same individual.

The *diffuse form* is rare enough, and coincides with hyperhidrosis. It is constituted by a simple, diffused and uniform thickening of the corneous layer, sometimes reaching to several millimetres. The whole palmar surface, then the fold of the wrist to the finger ends, and the sides to the limits of the palmar epidermis, are covered by a corneous layer, semi-transparent, of an amber color perfectly combined. The papillary tufts are visible and not altered in the least; there is no appreciable desquamation, and neither rhagades or fissures. It is a yellowish vernix

which Brault compares with a layer of wax. In these cases, the more constant the hyperhidrosis the more souple the horny layer; the sudoriparous orifices, however, do not present anything abnormal.

The *nodular form* is characterized by small horny productions, compared by E. Wilson and others with minute corns. They are small callosities, a few millimetres long whose centre is occupied by a horny nodule, the size of a pin's head or a grain of millet. If enucleated, there is obtained a small white nacreous pearl, very hard, and perforated by excretory sudoriparous duct or channel. It leaves a small, globular cavity in the skin, which soon becomes filled up by a reproduction of the nodule. This localization is often well defined and distinct, but by no means constant, however, it has not been confirmed by any anatomico-pathological study.

There is not the least doubt that *Keratoderma* is one of the most tenacious manifestation of *Arsenicism*; it may persist for months and even years, long after the suppression of the remedy. The *arsenical cancer* follows the palmar *Keratoderma*, when old and intense. One or more warty patches become painful and fissured, with bleeding crevices; after a certain time, sometimes after several years, a flat ulcer, with raised callos borders, is formed. This ulcer extends slowly, its base becomes more and more deeply indurated, and its surface may undergo vegetative changes; a ganglionar localization is frequent enough. Simultaneously or successively other epitheliomatous ulcers develop at other places of the same hand, or on the opposite hand, or on the foot, presenting always the same evolution. Their most frequent seat is the palm of the hand, especially in the neighborhood of the wrist, or at the root of the fingers, then in the palmar surface or lateral surfaces of the fingers. The feet are less frequently affected, and when affected, the parts selected are the heel or the toes.

The evolution of the *arsenical cancers* is slow first, but at the end of a certain time becomes singularly rapid and serious. In the majority of cases, a series of extirpations, more and more extended ended in the amputation of the forearm or of the leg, which does not always prevent the ganglionar generalization, and finally a fatal termination. The cancers of the hand and feet have the most serious prognosis, and it becomes still more weighty by the multiplicity of the foci.

The *arsenical cancer* constitutes then one of the most serious complications to which the arsenical intoxication can give rise.—*Journal des Praticiens*.

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INFANTILE PARALYSIS,

BY

EDUARDO FORNIAS, M. D., PHILADELPHIA, PA.

INFANTILE PARALYSIS (*anterior poliomyelitis*) is an infective localization on the anterior horns of the grey matter. It is usually an *atrophic spinal paralysis*. "A sudden lesion of the large motor nerve cells in the anterior horns causes rapid atrophy of muscle with loss of faradic reaction and of reflex actions. The palsy and loss of reflex action, with limpness of the muscles are noted immediately, the wasting of muscle and loss of faradic reaction are observed at the end of a week. The limpness or flaccidity of muscle consists in an entire loss of muscular tone—tone is dependent on reflex action."

This *acute atrophic paralysis* is usually sporadic, but it becomes *epidemic and contagious*, demanding the isolation of the patients. There is no doubt that in certain cases it is a *specific infection*, as shown by the very distinct epidemicity of some observations. Perhaps in such cases we are dealing with another morbid entity, where the gravity is greater and the bulbar phenomena more frequent. *Cordier* has observed in a population of about 1500 inhabitants, 13 cases occur almost simultaneously. *Medin*, of Stockholm, has described a very important epidemic of *infantile paralysis* (1898) where the *bulbar phenomena* were marked. According to *Lappert*, (1898) the contagious power of *infantile paralysis* is limited. Epidemics have also been described by W. Pasteur, Buzzard, and others, and recently by Prof. Edward Mueller, of Mar-

bourg, Germany, (1810); but it is a noteworthy fact that in some of the cases neither the symptoms nor the *post mortem* findings exactly corresponded with the typical cases of *anterior poliomyelitis*. It is important to note that some of the patients suffered from the prevailing fever, but not from paralysis. Ashby and Wright record a case where there was a feverish attack from which the patient recovered, followed by a similar attack, associated with paralysis of one leg. The writer can report a case in which an *acquired talipes* followed an attack of measles. Gowers declares that, as a form of paralysis exactly similar occurs during the later years of childhood and also during adult life, the name of *infantile paralysis* should certainly be abandoned, and substituted by *cornual myelitis*.

In view of the many atypical cases observed, it seems to me, that nowhere is individualization more important. We should always bear in mind that while in typical cases there is more or less complete loss of motor power without the sensory nerves being affected, yet it sometimes happens there is *severe pain*, and in rare instances *anesthesia*. It is certain in these exceptional cases the lesion is not absolutely confined to the anterior horns. There may be *severe shooting pains* before the onset of the paralysis, or the pains may remain and there may be *hyperesthesia*, or pain in handling the limb. Such cases, says Ashby and Wright, readily pass muster as "*hysterical*," especially in girls, but the definite paralysis which remains makes the diagnosis only too certain.

Many other well known facts could be mentioned here, about the evolution of this disease, if only to show the importance of a correct diagnosis, especially to comply with sanitary laws and protect the community from infection. I shall not neglect, however, to introduce in this paper the recent investigations of Prof. Muller, of Marbourg, Germany, for I am inclined to think that some of his remarks will lead to a broader elucidation of this important subject.

Under the title of "*Die Spinale Kinderlähmung (Infantile Paralysis)*" Prof. E. Muller has presented to the medical profession, an interesting and transcendental work, from which I have taken the chief points of the clinical and epidemiological study of 130 cases of poliomyelitis.

During the last summer and fall (1909) certain provinces of Germany, and especially *Westphalia*, were visited by an *epidemic of infantile paralysis*. As several cases of contagion

were discovered in a suburb of Marbourg (*Weidenhausen*), Prof. Muller addressed a circular to all the physicians of Hesse-Nassau requesting them to report to him all cases of *infantile paralysis*, both confirmed and abortive, that may have come under their observation, and to give him also a detailed account of all their cases. It is in this manner that Prof. Muller was able to collect 130 cases of this disease, most of them personal cases, for almost all the contaminated were examined by him, either at the hospital or privately.

Prof. Muller states that he has called his work *Infantile Spinal Paralysis* because this name covers well the type of the disease usually found. But he remarks that often we have to deal with a *bulbar*, or even with a *cerebral paralysis*. Still, more important are his assertions, that children are not the only ones affected, adolescents, and even adults have become a prey to the disease. Interesting is likewise to learn that frequently, in the abortive forms, he did not verify any distinct paralysis. For all these reasons, the author prefers the name of *Haine-Medin-Disease*, which he expects will soon be substituted by the name of the microbial agent, cause of the infection.

Noteworthy, above all, are the *epidemiologic observations* of this authority. He has been able to prove that *contagion takes place from man to man*. He asserts that the causal agent is not generally transmitted directly by the child, but by the healthy persons of the surroundings, who are not only the carriers, but the propagators of the disease.

He has certainly studied with much care the *symptomatology of infantile paralysis*, and has, above all, made strenuous efforts to analyze the signs of the onset.

He attaches great importance to the following symptomatic triad:—1. *Considerable hyperesthesia*, very precocious, but rapidly disappearing. 2. *Abundant sweats*. 3. *Leukopenia*. These three signs are not always associated, but their presence is very important because they often allow to trace a commencement or an abortive form of paralysis.

In the first chapter of his work, the author recalls to mind the researches undertaken with the experimental poliomyelitis of the ape. Then he studies the *pathological anatomy* and the *pathogenesis* of the infection. The last chapters deal with the *abnormal or abortive forms*, with the *diagnosis*, and with the *treatment* of the affection. (*Note.* Those

interested in the subject can obtain the book of Prof. Muller from the house of Julius Springer, Berlin).

It has certainly taken years to find out that *Infantile Paralysis* is an *infectious* and even *contagious* disease. Those acquainted with the researches of Flexner and Lewis, published in the "*Journal of the American Medical Association*," of November and December of last year, and of January of the present year, must have necessarily observed how fruitless have been their efforts, for no virus or micro-organism has been discovered by these scientists. It is to be hoped, however, that further labors may crown their efforts, so that we may be able to know something positive about the *etiology* of this old disease. In the meantime we should watch with interest, not only the essays of culture made at present by Dr. Levaditi, of the Pasteur Institute, but the experimental studies of *Infantile Paralysis* undertaken by Prof. Muller, of Marbourg. We expect also a great deal of information from the investigation promised by our Government, which will be soon conducted by Surgeon General Wyman and Drs. Anderson and Frost, of the Hygienic Laboratory of the Marine Hospital Service.

Since the prevalence of *infantile paralysis* in this city and elsewhere throughout the country, attention has been called to the efforts daily made to investigate into the cause of this disease by various physicians capable to undertake the task, and no doubt we will gain some valuable information about it; but we must admit that, so far, the evolution, symptomatology, diagnosis, course and termination of the malady, have been variously described by routinary men claiming authority to speak, and unless the germ that causes the disease acts differently in different subjects, and, in some cases, in too small a quantity to produce its specific effects, we must conclude that *infantile paralysis* is a versatile affection exhibiting confusing irregularities which only the discovery of the germ can put at rest.

I am at a loss to understand how an inexperienced physician, with book-knowledge only, can realize what he is treating, and make a correct diagnosis. If we take *etiology*, for instance, we find that *cold*, *traumatism*, and *dentition* have been incriminated. In England, especially, dentition has been considered a potent cause, and there it has been called *paralysis of dentition*. Lefert claims that *neuropathic heredity*

has a much more contestable influence here, than in other diseases of the nervous system, and that no cause has as much importance as *infection*. For Legrand, the following infections should be considered: Measles, scarlatina, whooping cough, diphtheria, small pox, mumps and typhoid fever; he also asserts that predisposing causes are, first *age*, from 12 to 18 months (period of dentition), second, *neuropathic heredity*. Laval maintains that the infective localization in the grey matter usually takes place at from 1 to 3 years of age, and advises to consider always the *neuropathic heredity*. Hutinel describes *infantile paralysis* as an affection of early childhood (2 to 9 years). Marie has demonstrated that *infective diseases* hold an important place in the etiology of this form of paralysis. Money states that although most common in the first two years of life, during the rachitic periods, and the period of first dentition, *acute anterior poliomyelitis* may occur at any period of life; it may supervene suddenly in the midst of perfect health, or follow an acute specific fever. Carter admits that its *causes are obscure*, but it may sometimes be traced to *injury*, or to *exposure to cold and wet*. Elder and Fowler considered its *etiology* as obscure as its *pathology*. They give as age-limits, between six months and four years, but admit that by far the greater number of cases occur before the beginning of the third year, and that *cold* and *trauma* are most frequently attributed as causes, though it may succeed some acute disease. Ashby and Wright state that the disease, which is usually known by the name of "*infantile paralysis*," occurs most frequently during early childhood; but, as a form of paralysis exactly similar occurs during the later years of childhood and also during adult life, the name certainly ought to be abandoned. It most frequently occurs during the first three years of life, at least four-fifths of the cases occurring at this period (Gowers). It is less frequent during the first six months than it is during the last half of the first year and during the second. It is by no means a rare disease in older children. Hughes considers "*infantile spinal paralysis*," essentially a disease of early life. The second month to the third or fourth year. Among its causes, he mentions, *cold* and *damp*, *dentition*, *injuries to the spine*; and admits its development during convalescence from the *acute exanthemata*. Hatfield asserts that the exact cause is yet unknown, but probably this disease is

due to the action of toxins upon the trophic cells of the anterior cornua of the cord. According to this authority, many cases are known to follow chilling, or attacks of acute infectious diseases, and possible dentition, and he has found this paralysis most frequent in males and during the early summer months. Goodhart says that the alpha and omega of the students' knowledge on this subject comprises often no more than a few facts about what has from time immemorial received the name of *infantile paralysis*. It has been sometimes called "*Essential Paralysis*," because at one time it was supposed to be due to a disease of the muscle. Some still contend that a muscular lesion is the primary fault, and that the nerves or cord undergo subsequent changes from an ascending neuritis. But the generally received doctrine is that the paralysis is due to a primary disease of the nerve cells of the anterior cornua of the spinal cord. It is a disease which is not confined to infancy, but so largely preponderates then that 154 cases, out of a total of 205, occurred between the ages of six months and two years. It has been noticed within a few days after birth (Ross). It is liable to affect the healthiest children, attacking either sex equally, and is said to be more common in the summer months. Goodhart quotes Duchenne, as saying, that he has not been able to associate this paralysis with nervous disease in the family of any kind.

I have extended myself so much here in order to warn the student against the acceptance of many debatable and unconfirmed assertions. In fact, every book we consult on the subject presents many discrepancies not only in its etiology but in its diagnosis, which must be frequently puzzling to the new-beginner. We are sure, however, that *acute anterior poliomyelitis* is both *infectious and contagious*, and that in the future, *prophylaxis* will play an important role in the treatment of this disease.

For the benefit of those unacquainted with the evolution, course and termination of *infantile paralysis*, I shall endeavor now to give a *resume*, including its *pathological anatomy*, *pathogenesis*, *symptomatology*, *diagnosis*, *prognosis* and *treatment*.

Anatomical pathology. While the causes of this *myelitis* are very obscure, it has been clearly shown that the lesion is an acute inflammatory affection of the anterior cornua of the cord, which is followed by sclerotic changes, with de-

struction of the ganglion cells and degeneration of the motor nerve-fibres. The maximum of lesion is found in the lumbar cord. Under section we noticed softening foci, under the microscope the cells have vanished, and are replaced by *granular bodies*. These are *congestive lesions*, and a beginning of neuroglial sclerosis. Later, there are produced *atrophies* by *degeneration* of the anterior roots, and of the motor axis-cylinders of the nerves. The muscles undergo an sclerotic transformation, and the muscular fibres disappear.

The question is settled that the disease is an *anterior poliomyelitis*. For years, repeated discussions have taken place to ascertain if the lesion affects primarily the nervous cell or the blood-vessels. The *arterial theory*, however, is the one generally admitted. The disease is considered by many an *infectious arteritis* determining the necrosis of a nervous tract, and as the nervous cells are not susceptible of regeneration, this loss is definitive and entails also loss of function. The analogy with *cerebral sclerosis*, which is probably also an arteritis, is great, but the consequence of it is a lesion to the central motor neuron.

Symptomatology.—A child going to bed apparently well may be found paralysed the next morning. In fact, the *onset* is sudden, and without prodromes, and characterized by *fever* of variable intensity, rarely by convulsions. Sometimes the child complains of *pains* in the lower limbs and in the lumbar region. This period only lasts one or two days. The *symptoms* are sometimes very slight, and the prodromes pass unnoticed; in such cases the outset is announced by *paralysis*.

The subsequent manifestations of the disease have been divided into periods. The *period of general infection* has just been described, and we may add to it—that the *pains* and other *sensations* noted at this period should be ascribed to a shock or temporary involvement of the posterior horns and nerve roots.

In the *PERIOD OF MEDULLARY LOCALIZATION* appears the paralysis, striking at once the parts to be affected. Usually it is a *paraplegia*, but other muscles may become involved. Some muscles are more frequently involved and more severely affected than others, and these are apt to remain permanently paralyzed and wasted (*deltoid, anterior tibial, peronei*). The paralysis may not reach its greatest extent or highest degree until two or three days have elapsed. The *reflexes* are

abolished or only diminished. The skin of the parts affected becomes bluish in color and cold. The muscles of mastication, of nutrition, and the sphincters are never attacked. It is essential to note that sensory cutaneous disorders are absent in the vast majority of cases.

Period of regression. The tendency of the disease to regress is striking, for we frequently notice muscles once paralyzed again become useful. The amount and degree of recovery, however, is very variable, and as a rule some muscle remains weak and wasted. Two or six months after the onset, the paralysis abandons certain muscles and becomes definitively localized, preferring the extensors or toes, anterior tibial and the lateral peronei. It is in exceptional cases that *regression* is complete, but in the ordinary cases certain symptoms allow to foresee which will be the muscles affected, and the muscles kept sound. When a muscle does not possess the *reaction of degeneration* after three weeks, it will recover its contractility. Muscles which still react to the faradic current, one week after the paralysis has appeared—and still more, those which so react two or three weeks later—will almost certainly recover. The later a muscle shows the reaction of degeneration the greater prospect is there of at least a partial recovery. When complete reaction of degeneration has developed within ten days, entire recovery of function is scarcely possible, and, in all probabilities the muscle will be permanently paralyzed.

Period of atrophy.—It is under the influence of the muscular atrophy, of the contraction of the sound muscles and of the abnormal pressures, that *deformities* are produced. The functional, muscular loss of power is soon followed by a sort of *muscular retraction*, or at least a partial arrest of muscular development. As a result of this *paralytic atrophy* we observe *vicious attitudes*, chiefly due to osseous or articular deformities. (*Pes equinus, equino, varus and valgus, genu-recurvatum and incurvatum, extension of the wrist and claw-hand, subluxation of shoulder joint, scoliosis, kyphosis or lordosis*, all, alterations showing the distribution of the paralysis, atrophy, as well as of the retractions). The most frequent deformities are the *equino varus* when the child is not walking, and the *flat valgus* when he walks. The leg is bent upon the pelvis, and to make walking possible, a *lordosis* is produced, which very often is not paralytic. The limbs, under

this condition, do not grow at their proper rate and the bones may become very thin—the scapula often fails to grow when the shoulder is affected. According to Money, it is overaction of the antagonistic muscles which cause deformities to arise. “The failure in growth of the skeleton is partly due to the absence of the stimulus to nutrition afforded by muscular action with its accompaniment of increased blood-supply.” Finally trophic troubles are produced, such as chilblains, ulcers, falling of hair, grooved nails, and sudoral hypersecretion.

Termination.—A complete cure is exceptional. The termination *by atrophy* entails variable disorders. Health may remain perfect; or, become poor, when the child is confined to bed. Sometimes the *muscular atrophy* (*Aran-Duchenne-type*) attacks subjects, presenting an infantile paralysis. In recovering from paralysis it will be observed that a muscle may be contracted by the patient's volitional effort before this muscle yields a contraction to the faradic current, showing how much more subtle than the faradic stimulus is the normal nervous impulse. The appalling list of death of infants, says Dr, John F. Anderson, is not the most distressing feature of the disease, as thousands of children are permanently crippled or deformed, the disease not being necessarily fatal.

Diagnosis.—An early *diagnosis* during the inflammatory period of the disease, says Paul Lefert, is almost impossible. It can at this moment be mistaken for the outset of all infectious diseases. In the absence of a history, says Elder and Fowler, it may be impossible to distinguish between infantile paralysis and a birth palsy affecting the arm. But, the sudden loss of power, with reaction of degeneration and preservation of sensation, coming on after a brief febrile attack, especially in children under three years of age, apparently healthy or convalescent from any infectious fever, can hardly be anything else than *anterior poliomyelitis*.

The case may be different when the disease starts with convulsions, is attended with severe pain and tenderness, involves the bulb and the brain, and occurs in the adolescent or adult. *Severe pain and tenderness of the limbs with fever* are not infrequent and at the outset rheumatic fever may be diagnosed, but the knee jerk is lost. Some swelling of a joint with vaso-motor trouble and erythema and sweating have

been noticed in the early stages and have thus increased the rheumatic resemblance. Besides pains there may be spontaneous sensory disorders with feelings of numbness and tingling leading to a mistake.

Moreover, the onset is not always sudden nor always in the night time. Instead of the palsy being first to attract attention, the earliest signs of illness may be increased heat of the body, a few spasmodic twitches or severe convulsions.

Goodhart has very properly asserted that paralysis of infancy and childhood often presents difficulties from the very fact that the subjects of the disease are unable to give an account of their sensations, and that they are brought for treatment perhaps months after the loss of power was first noticed. However, when epidemic, these difficulties are of little importance. It is under these conditions that the beginner must carefully notice that as time goes on the early paralysis, instead of remaining stationary, begins to diminish, till, in a few weeks it is limited to a group of muscles, or even to a single muscle—or in severe cases to a whole limb.

In the *diagnosis of infantile paralysis* the beginner should always bear in mind that in no other condition do we meet with a suddenly developing, extensive and complete paralysis, which so constantly tends to at least partial recovery. And yet, says a French authority, "it is only tardily that the complexity of the phenomena of *infantile paralysis*, and the dissociation of its symptom can be established."

According to Baumel, another French authority, the *diagnosis* of infantile spinal paralysis is based, conformably to period, on the loss of functional power, the vicious attitude, the muscular atrophy, and the retractions and deformities. The *loss of functional power* can be confounded with *hypokinesia* of the lower limbs, where the children which are already using their legs in walking or standing, momentarily lose this faculty during dentition. Many cases of this kind have been mistaken for infantile paralysis, but the hypokinetic movements are due to defective motor response to a stimulus; they are certainly feeble, lack energy, but they are preserved, or at least possible. Should there still exist any doubt, the *electro-diagnosis* will remove it. In *hypokinesia* the reactions are normal, entirely different with *paralysis*. One may even confound *infantile paralysis* with the *growing pains of children*, which, as a rule, have their seat in the juxta-epiphyseal

cartilage, and with a certain difficulty in using the affected limbs, as a result.

A little care should prevent its being mistaken for a *pseudo-paralysis*, such as we meet with in *syphilis*, *osteomyelitis*, etc. This is due to the disjunction of the diaphysis and the epiphysis of the bones, and recognized by the pains provoked by motion and by the tumefaction of the joints. When *paralysis* develops suddenly after a *trauma*, it may be difficult to say whether the cause is spinal hemorrhage or poliomyelitis; possibly the latter may result from the former: *Obstetrical radicular paralysis* are localized in a group of muscles, deltoid, infraspinatus, biceps, anterior brachial, supinator longus, and coracobrachialis.

The *atrophy* may lead one to think of the existence of a *primitive myopathy*. One condition with which it is sometimes confused is *extreme muscular atrophy following rickets*. In *diphtheritic paralysis* there is implication of the pharyngeal and ocular muscles. *Hereditary ataxia* has *choreiform* movements.

Multiple neuritis is rare in children, and differs from anterior *poliomyelitis* in its gradual onset, in its symmetry, in the presence of pain and other sensory disturbances, in the occurrence of oedema, and in the chronic course of the fever. Yet, it is often confounded with this form of neuritis, and its diagnosis is made with great difficulty. *Poliomyelitis*, says Klemperer, can only be diagnosed with certainty when it occurs in children, where it is known as the *essential (spinal) palsies of children*. Here the age, the acute onset, the subsequent flaccid paralysis, accompanied with atrophy and the presence of degeneration reaction, the absence of reflexes, and the preservation of sensation, will establish the *diagnosis*.

Prognosis.—Benign *quoad vitam*, but serious by the incurable lesions the disease entails. It should be measured by the degree of paralysis, atrophy and muscular retraction, as well as by the vicious attitudes and consecutive deformities (osseous or articular). The *symptomatic predominances* are signs of value. During the development and course of the disease we observe many cases becoming worse every day without our resources being of any avail. When the disease is epidemic the prognosis becomes necessarily more reserved. It is otherwise rarely fatal except when the thoracic muscles are involved. If the muscular contractility is lost to the in-

duced current, the case will be difficult and the treatment protracted; if the primary current is also powerless, a cure is impossible (Hammond). Relapses are rare. After many months of *complete paralysis* have elapsed *a fortiori*, after a year or two—as often happens in hospital cases—any hope of recovery is out of place. We can then only look for such amelioration as accompanies the better nutrition of the limb, which sedulous attention may still procure. (Goodhart).

Treatment.—The treatment is both *internal* and *external*, and as *infantile paralysis* is epidemic and contagious, it is also *prophylactic*, demanding the strict isolation of the patients. There is also a *consecutive treatment*, including orthopedic measures and surgical intervention.

I think Goodhart is right in asserting that the only question that arises in the treatment of this form of paralysis is when to commence the application of electricity—that is to say, what should be done in the very early stages. “It is not often that the disease comes under notice at this time, but if it should, some advocate resorting at once to *electrical treatment*, while others urge that any acute disturbance should be allowed time to subside.” There is no doubt, says the same authority, “that treatment has to be steered between Scylla and Charybdis—those on the one side, seeing the dangers of adding to a process they suppose to be inflammatory, advocate rest; those on the other insist on the early and hopeless degeneration of muscle if electricity be not resorted to.” “Now, assuming the observations to be correct which have been made, and that the early stage of infantile paralysis is one of vascularity and cell-proliferation in the spinal cord, I think there can be no question that we should not be too ready to work the centre into action. I can conceive that great harm may be done in such cases. But we must also remember that the initial process, in all probability, rapidly subsides, and much of the original affection clears up, and when this happens—in the course of five or six days after the onset—we may begin to pay attention to local treatment.”

Baumel insists on the early application of *electricity* during the first eight days, and it should consist of *continuous currents*. He thinks this the most propitious time for therapeutic intervention and to select the most efficacious means to employ. Even when late, *electrotherapy* still remains the proper treatment. At this time it consists of *continuous cur-*

rents (galvanic) and *interrupted currents* (faradic). The *galvanic* is used to improve the neuro-muscular nutrition; the *faradic* to rouse up or maintain the contractility, and as a consequence the function and life of the parts not yet irremediably effected.

The *faradic current* then, is used for those muscles in which it induces contraction; where it fails the *galvanic current* is the indicated one. In no case, however, should the current be stronger than what is required to cause contraction, but the use of the *induced current* should be persevered in so long as muscular contractility continues. If this is lost to the *induced current*, the case will be difficult and the treatment protracted; if the primary current is also poweriess, a cure is impossible (*Hammond*).

Massage is useful in promoting the circulation of the limb, and every effort should be made by passive movements and position to prevent *deformities*. Children should not be allowed to walk. The affected limb should be kept warm. If deformities result they must be dealt with surgically. Some deformities may require *orthopedic appliances*. Vicious attitudes may demand *tentotomy*, *tibiotarsal arthrodesis*, etc.

The *internal treatment* is always symptomatic, and no remedy ever employed by any school of medicine has shortened the course of the disease. The clinical history of *Aconite*, *Secale*, *Cicuta*, *Belladonna*, *Hyoscyamus*, *Nux Vomica*, *Strychnia*, *Causticum*, *Gelsemium*, *Arsenic*, *Phosphorus*, *Conium*, *Agaricus*, *Plumbum* and *Picric Acid*, is encouraging enough to devote a few hours of study to their pathogenesis.

LITERATURE: Baumel, *Maladies des Enfants*. *Legrand*, *Medicine Infantile*. *Laval*, *Maladies Journalieres*. *Lefert*, *Medicine Infantile*. *Comby*, *Maladies de l'enfance*. *Hutinal*, *Les Maladies des Enfants*. *Ashby and Wright*, *Diseases of Children*. *Elder and Fowler*, *Diseases of Children*. *Money*, *Diseases in Children*. *Goodhart*, *Diseases of Children*, etc., etc.

PROLAPSE OF THE CORD.

BY

E. ROBERTS RITCHIE, M. D., MOORESTOWN, N. J.

(Read before the West Jersey Homœopathic Medical Society.)

Although a funic presentation only occurs once in two or three hundred cases, it is a complication which we must know how to treat if we expect to deliver a live baby, as the infant mortality in this condition is over fifty per cent.

Herman describes three distinct conditions of funic presentation, as follows: First, true chorda praevia, in which we find the cord presented at the superior strait from the very beginning of labor; second, prolapse of the cord due to a carrying down of the cord at the time of the rupture of the membranes; third, expression of the cord, which occurs late in labor, and is due to a forcing down of a loop of the cord by the side of the presenting part which has already become engaged.

The causes of this complication of labor may be either foetal or maternal. The foetal causes may be certain mal-presentations, under size of the foetal head, or anomalies of the foetal appendages. The maternal causes may be a contracted pelvis, pendulous abdomen, or a uterine tumor; in fact, anything that will prevent the presenting part from accurately filling the parturient canal.

The diagnosis of this condition is simple after the membranes have ruptured. Before rupture occurs, however, is the time to make the diagnosis, and it is then often quite difficult owing to the fact that the loop of cord recedes before the examining finger. The chief point to elicit is the pulsation in the cord, and if this can be felt the diagnosis is assured.

Before taking up the treatment of this condition let me cite a case from my own experience. Some years ago I was called to see a large, fat, colored woman who was in active labor. On examination I felt a soft substance which continually eluded my finger. The membranes were intact so that it was impossible for me to tell positively what it was, but I thought it might be a foot. At that time I had never had a breach presentation and did not know just what a foot did feel like. As dilation was quite advanced, and as I felt that I must make a diagnosis in order to treat her properly, I ruptured the mem-

branes and immediately recognized a prolapsed cord. I then realized that I had made a mistake, as the condition should be diagnosed before the membranes are ruptured, if possible. Recalling that version was one of the methods suggested for treating the condition after the membranes are ruptured, I gave the patient an anesthetic and proceeded to do an internal podalic version. After considerable effort a dead foetus was delivered, but the mother made an excellent recovery.

The proper treatment of this condition consists in putting the patient in the knee-chest position for fifteen to thirty minutes before the membranes are ruptured. As a rule, the cord will gradually settle to the fundus. If it does not, gentle taxis may be made upon it which will assist gravity in carrying it out of harm's way. The woman may then be placed in the Sim's position, lying on the side away from that which the cord occupied. If the membranes have ruptured with the cord still presenting, there is no pulsation or foetal heart sounds; in other words, if we are morally certain the child is dead; non-interference is the course to follow. If, however, we have reason to believe that the foetus is still living, we may try to replace the cord as above stated, or we may take a hard rubber catheter and passing a loop of tape through it so that it comes out through the fenestrum, pass the loop of tape around the loop of cord and hook it through the end of the catheter. The whole thing may then be pushed up into the cavity of the uterus and the catheter withdrawn or left in situ as suits the convenience of the physician. The presenting part should be forced down into the pelvis after the cord is out of the way and held there with an abdominal binder if necessary.

If these methods all fail, rapid delivery of the foetus is indicated, and this is best brought about by version, or possibly under some conditions by the use of forceps.

ADRENALIN IN ACUTE ASTHMA.—C. Matthews cites his experience in several cases of acute asthma in which he found a spray of adrenalin very effectual. In one case the young patient had previously shortened his attacks by the use of cocaine, but this had a bad effect upon the heart and adrenalin was substituted with satisfactory results. The author states that there was no hypertrophic rhinitis present. *The Post-Graduate* in commenting upon this treatment contends that the fact that an attack of acute asthma could be controlled by cocaine or adrenalin is strongly indicative that there is present some local point of irritability, which can and ought to be removed.—*August North American*.

CHOREA IN CHILDREN.

BY

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UNDER this caption, on page 544, of the July issue of the *HAHNEMANNIAN MONTHLY*, are some observations that induced me to write this. Some years since in studying up the sources of the pathogenesis of arsenic, I was struck by the number of cases of chorea produced by Fowler's solution, and, if I remember correctly, not produced, or, to a less degree produced by other forms of toxic arsenical preparations.

This led to a systematic trial of the standard solution as dispensed in the drug stores. The results have been so satisfactory that I have never been obliged to resort to any other measures. I do not compel my patients to remain in bed, nor to remain indoors, except in extreme cases, where locomotion is so seriously interfered with as to make walking dangerous.

They are relieved, as far as possible, of all unusual and unnecessary mental strain, especially that which comes from remarking their condition. The patient is taught by suggestion and environment to regard the disease hopefully and without worry.

No change is made in the food, except in case of anorexia, when nearly all food is omitted for 24 hours, the child being kept quiet, but not restrained. During this period only one or two one-drop doses in plenty of water are given.

Long periods of rest at night, early to bed and late to rise, in case sleep can be continued. Encouraged to eat well of the food best relished, to spend some time each day in the open air, the longer the better, and then follows administration of the solution.

The first week, one drop from the end of rather blunt medicine dropper, in at least a teaspoonful of water, five or ten minutes before each meal, and at bed time. The second week two drops in double the water. The third week, in case no improvement has set in, the dose will be three drops. At this time I watch carefully for swelling about the eye, in which case the remedy is discontinued for a few days and started at the one-drop dose again.

I prefer to keep well below the toxic signals, generally two

drops, or at most three is the limit. Only in one case that I now remember was four drops given and that for a short time, to be soon discontinued.

All grades of cases have been treated from the twitching of a few muscles, or the shrug of one shoulder, to general chorea so severe that the patient could not walk, or feed herself. In no case has it failed to give the most satisfactory results. I say this deliberately. I do not say that it may not fail or will not fail. Experience alone will prove or disprove that. The cure is usually complete. The worst case was some six or eight years since. The patient is as far from manifesting any trace of the trouble as anyone living. The last was a few months since, in a case that had resisted treatment for a long time.

RELATION OF TONSILS TO RHEUMATISM.—It is surprising, according to Schichold, how often suppuration will be found in the tonsils in persons afflicted with rheumatism. The customary inspection will not suffice, but the tonsils must be freely exposed by means of a hook which will pull them forward. The germs responsible for rheumatism are contained in the pus filling the follicles, and are only too apt to enter the blood after an acute inflammation.

Less commonly, rheumatism will be caused by pus in other localities, such as in carious teeth or in the accessory sinuses of the nose. Even Luschka's gland may be responsible.

In treating rheumatism it is therefore of the greatest importance to remove the pus, which, in case of the tonsils, is best accomplished by slitting open the follicles and subsequently removing as much as possible of the organs. The customary tonsillotome should not be employed, since it removes only a small portion from the top of the tonsil. With the pus removed, the rheumatic attack will be checked and recurrences will be avoided. Besides the affection of the joints, the complications will also be favorably influenced. The inflammation of the endocardium and myocardium can only be cured if the affection is recent and no serious tissue changes have occurred. Old verrucose deposits are not influenced and may even set up recurrences.

Besides checking rheumatic affections, treatment of the tonsils will also improve conditions which often accompany tonsillitis, such as inflammation of the kidneys.—*Muench. med. Woch.*

ANTIMONIUM JODATUM is the remedy for pneumonia associated with marked bronchitis in phthisical subjects and characterized by muco-purulent expectoration of sputum of a rusty fibrinous character. The 3x trituration seems to do the work.—*Medical Century*, June, 1910.

**A PLEA FOR THE MORE CAREFUL EXAMINATION OF CASES OF
CHRONIC SUPPURATIVE OTITIS MEDIA.**

BY

GILBERT J. PALEN, M. D., PHILADELPHIA.

It is not the purpose of this paper to give the detailed technique of the examination and treatment of cases of chronic suppurative otitis media; these shall be alluded to only briefly. It is the intention to bring for your consideration the more serious side of these cases, in order to make a plea and to show the necessity, for the more careful examination of these conditions, than it has been the custom of the profession to make; to advise against routine treatment or the instituting of any form of treatment, until after a thorough examination, the condition present is understood. Lastly a few cases will be cited, illustrating, to some extent, the points it is desired to emphasize.

Improved methods of diagnosis, which have enabled us to determine more thoroughly than heretofore exact conditions; increased anatomical knowledge and especially the immense number of reported and carefully studied cases of serious conditions resulting from suppurating aural disease, have proven absolutely the importance of the careful examination and treatment of this class of cases. Many instances of grave complications are recorded which ran a symptomless course and also fatal cases in which no subjective symptoms had occurred or had at least been complained of. In many of these cases, however, there were probably objective signs, which would have pointed to the necessity of operative treatment, had the patient been properly examined.

It has been proven post-mortem, as well as upon the living subject that, in the great majority of these cases, there are marked changes in the antrum of the mastoid process and there are many aurists (notably Heath) who contend that the origin of the otorrhoea, in a large percentage of the cases, is in the mastoid antrum and not in the middle ear, the middle ear cavity acting as a channel of drainage, the changes found within the middle ear cavity being secondary and caused by the irritation of the discharge; just as nasal polypi are known to be produced by secretions draining from the nasal accessory cavities. This explains the lack of result of local treatment in

many cases of chronic otorrhoea, it being impossible by such treatment to reach and to eradicate the diseased focus.

Post-mortem examination of fatal cases has furthermore proven, that the cause of the extension of the condition to surrounding structures was an obstructive one. The obstruction causing a damming up of secretion, these producing tension and eventually a rupture of the cavity walls at some point. In other cases it has been proven that there were unusual anatomical relations of brain structures to the antrum, or, that there was an unusual structure of the mastoid.

These post-mortem findings further emphasize the importance of the condition we are considering and point out that these *chronic* suppurative cases should receive a *special* attention for, as we have seen, marked changes and the gravest of complications may occur and become well established, before any pronounced guiding subjective symptoms are complained of. In acute suppurative processes the same train of complications may arise, but the very acuteness of the attack directs at once the attention of the physician to the condition.

Before any form of treatment is instituted a thorough examination of the case should be made; this includes history, subjective and objective examination, microscopic examination of the discharge and in some cases blood examination.

Very careful histories of these cases should be taken, just as careful as are taken of other conditions; they will prove of marked aid in diagnosis and prognosis. For example, cases which have originated during measles or scarlet fever are exceedingly stubborn to treatment; your prognosis, as regards cure by local measures, would be guarded in such a case. A long-standing otorrhoea with recurrent pain, indicates some obstructive condition or mastoid involvement. An otorrhoea which has developed without pain is probably tubercular (objectively you may confirm this by finding multiple perforations of the drum and by using the ophthalmic or skin tests.)

Microscopic examination of the discharge is essential in all cases to determine, if possible, the character of the infection. A streptococcic infection is more likely to become serious than a pneumococcic or staphylococcic. The largest percentage of brain abscess, thrombosis of the lateral sinus and meningitis have been found to be due to streptococci. The discharge must also be examined for cholesterin crystals. The presence of these is proof of cholesteatomata somewhere with-

in the middle ear tract and while many such cases have been reported as cured by local treatment, the overweighing percentage have eventually resulted fatally or have been saved by operation.

The subjective examination of these cases is important. While the larger percentage of such patients will complain of nothing but the otorrhoea and the deafness, a careful subjective examination will often elicit symptoms which the patient does not think to complain of, because he has been accustomed to them, or, because he attributes them to some other condition. *Probe these cases for symptoms*; take careful note of all symptoms given you; study them alone and in connection with other symptoms. Some of these symptoms may have no bearing on the case, others will prove of marked value. We have frequently demonstrated the importance of this subjective examination and it has led us to the early recognition of serious complications which were proven by the operative findings.

The objective examination presupposes a knowledge of the anatomy and experience in recognizing pathological conditions. A variety of conditions will be found in chronic suppurative otitis media and these must be recognized, for each one demands certain treatment and suggests existing conditions. The objective examination becomes, therefore, also exceedingly important. Much can be learned from close observation.

For example the position of the perforation is often suggestive. A perforation in the upper anterior portion of the drum, points to a lesion near the eustachian tube or in the eustachian tube, and we know this type to be less dangerous than the one in which there exists a perforation in the upper posterior portion, as this indicates a probable lesion of the mastoid. A peripheral perforation frequently indicates necrosis. A perforation above the short process, in Schrapnell's membrane, suggests a necrotic process in the attic (the upper portion of the middle ear cavity). Polypi or granulations may mean necrosis and indicate necessity for examining for this. After cleansing the middle ear cavity you will, by careful observation, be often able to note the direction from which secretion is occurring and so can draw conclusions as to the probable portion affected. These are only a few of the points to be learned from the objective examination.

Blood examination has become to the aurist an important factor in diagnosis and in cases where there is any doubt as to the occurrence of deeper complications, a blood count should be taken from time to time. While there is a difference of opinion as to the value of this means in diagnosis, we have found it of great aid to us in many cases, our operative findings proving the results of the blood examinations as regards pus absorption. Also in cases of thrombosis of the lateral sinus, positive blood cultures have, after the elimination of other foci, enabled us to diagnose the condition.

Having carefully and systematically examined our case and having determined exact conditions present, we must then decide upon the treatment to be given. Routine treatment is as bad as the routine treatment of any other condition. Peroxide of hydrogen, dusting powder, etc., are all of value in certain suppurative aural conditions; they are absolutely contraindicated in others, for, as has been pointed out, a variety of conditions will be found in chronic otorrhoea, each of these demanding certain treatment, which treatment might prove deleterious were another condition present.

The keynote in the treatment of an uncomplicated case, (by this we mean a case in which there are no existing conditions pointing to the necessity for immediate major operative treatment) is the establishment of free drainage through the external auditory canal, by removing everything which is in any way an obstruction to free drainage. Such obstructions are various; a too small perforation, granulations, polypi, swollen mucosa of the tympanic cavity, cholesteatomata, cerumen or epithelial debris, adhesions in the tympanic cavity, and exostoses. It is not the province of this paper to discuss the details of treatment and we will offer only a word of caution on one or two points. In the removal of polypi great care must be taken to determine the attachment, and if this is found to be the roof of the middle ear cavity, it should be left alone and the advisability of major operative treatment be considered as a cure for the otorrhoea. When removing a polypus with an aural snare, no traction should be made. These growths frequently act as protection to necrotic areas and the forced removal of them has caused extension of the suppurative process to surrounding structures, and in some cases fatal results.

The removal of all obstructive conditions gives marked results in many cases. Every aurist can cite cases of otorrhoea

of long standing which have ceased following the enlarging of a too small perforation or the removal of obstructing granulations. If, however, after free drainage has been established, the otorrhoea continues, and local treatment fails to bring about a cure, the advisability of major operative treatment must be considered.

In a certain number of cases of chronic suppurative otitis media, and it is with this class we wish especially to deal, there occur subjective and objective signs which prove the presence of destructive processes in the mastoid or the serious involvement of neighboring important structures. These demand at once operative treatment or point to the future necessity for such treatment. Some of these signs, because of their very acuteness, the patient gives you unasked; pain over the mastoid with oedema, prominence of the auricle, marked temperature changes are easily recognized and familiar to every practitioner. The signs which we call attention to, are only elicited, in many cases, by most careful subjective and objective examination.

Some of the subjective symptoms are: *Recurrent slight pain*, which may be accompanied by a cessation or marked increase in the discharge; *excessive discharge* without pain; tenderness over the mastoid, which must be sought for in many cases, are symptoms indicating mastoid involvement. *Chilly sensations and sweating*, occur often in cases of thrombosis of the lateral sinus. *Stiffness of the neck*; we have found this in a number of cases of sinus thrombosis and peri-sinus abscess as well as in general mastoid involvement. *Epiphora*, which is often the forerunner of facial paralysis, due to necrosis or pressure along the facial nerve. Eye symptoms, such as *photophobia*, *diplopia*, *visual disturbances*; *inability to concentrate the mind*; *one-sided headache*; *sensitive areas upon the cranium* (these also must often be sought for), are frequently caused by extension to deeper structures. *Vertigo*, *nausea*, *vomiting* occur from labyrinthine involvement, although also in some cases of middle ear disease.

Among the objective signs are *facial paralysis*; *cholesteatomata*, seen objectively in situ or found in the discharge. *Rigidity of the neck*, especially of the sterno-mastoid muscle and discovered, in many cases, only by palpation. *Rigidity of the jugular*, indicating sinus thrombosis. *Slight temperature or pulse changes*. *Blood changes*, such as high leucocytosis

with increase of polynuclear cells, indicating pus absorption; the occurrence of *bacteria in the blood*, found in cases of sinus thrombosis. *Recurrent polypi*, frequently indicating necrosis. *Ocular conditions*, such as pupillary and fundus changes. *Aural nystagmus* indicating involvement of the labyrinth. *A sagging or sinking of the posterior wall of the external auditory canal*, close to the drum, which is often an important and frequently the only objective sign of mastoiditis found.

Any of the above subjective or objective symptoms occurring during a chronic otorrhoea, should be carefully studied and should be watched for in all cases. Together with other symptoms they may prove most important guides. The searching for these may appear a tedious procedure but when systematically carried out, becomes a simple matter, one which will save many cases from serious results and give others a better chance for recovery, by early recognition of an already existing serious complication.

The following cases are cited to illustrate the points which we have endeavored to emphasize:

Case 1, Mrs. J. C. C., March 9th, 1910. Constant otorrhoea and dull hearing for three years. Aural condition; a large polypus extending through anterior perforation in drum. Having determined attachment polypus was carefully removed; there resulted marked improvement in hearing and complete cessation in the discharge within a few days. We have seen this case eight years following the removal of the polypus. There had been no return of the discharge. This case is cited as one in which the establishment of free drainage was followed by marked result. A number of more recent cases could be cited but we have intentionally chosen this case, because of the length of time which had elapsed since the removal of the polypus.

Case 2, Francis T., age 12 years, June 9th, 1910. This case was referred from the slums by a student. He had seen this boy while treating another case, and knowing that facial paralysis is caused by aural conditions in many cases, he questioned him carefully and procured a distinct aural history. The patient complained of nothing and it was only after sharp inquiry that the aural history was obtained. The case was brought to us for examination. There was a marked facial paralysis of the right side. The aural condition showed some slight aural discharge, which, microscopically examined, prov-

ed a streptococcic infection; there was a large aural polypus filling up the external canal. The case was admitted to the hospital and kept under observation a few days, during which time he was questioned carefully for subjective symptoms, but none could be elicited. There were also no temperature or pulse changes, the boy appearing in every respect normal, except for the facial paralysis, which increased while he was under observation. He was operated on June 29th, 1910. There was found marked necrosis of the posterior bony wall of the external auditory canal, the anterior portion of the mastoid, the mastoid tip, the necrosis extending posteriorly and above to the lateral sinus which was found unusually far forward. The antrum and middle ear cavity were filled with granulations and pus and a large polypus extended through a perforation in the drum. A complete radical operation was done. The facial paralysis has been gradually disappearing and it is now only possible to detect a slight facial weakness.

Here we have a case with no subjective symptoms and yet there was present necrosis extending to the lateral sinus.

Case 3, Mrs. S., Nov., 1909. Age 51. Had abscesses in both ears as a child, following scarlet fever, has had recurrent attacks of pain followed by discharge. Three weeks ago pain followed by discharge. She was treated with aristol. The discharge ceased immediately. Three days after this noticed one-sided dull headache and dizziness which increased, could not think readily, became extremely nervous. Ten days ago fainted, unconscious twenty minutes, following this vomiting for two hours. Since this time persistent headache, vertigo more intense and with this nausea. Examination showed a yellowish crust at the center of the drum which was firmly adherent and when removed was followed by a flow of pus. On account of symptoms of labyrinthine irritation, as proven by tests, case was sent to the hospital. When seen a few hours later, there was a free discharge from the canal, her head symptoms markedly lessened and there was no vertigo. Next day a marked lessening of labyrinthine irritation and great general improvement. She was discharged at the end of a week but, on account of the history of recurrent pain, was advised to keep under the observation of her physician. I cite this case as one in which the use of dusting powder had caused pronounced symptoms by obstructing free drainage.

Case 4, Mary H., age 15, June 30th, 1910. Acute suppura-

tive otitis media during measles when three years old. Since then continuous otorrhoea with dull hearing. History of recurrent pain and at times increased discharge. Two years ago pain back of right ear with swelling which subsided. On close questioning patient said she had frequent intermittent temporo-parietal headache, and this was especially worse when she had recurrent aural pain. Also when questioned, she remembered having frequently noticed stiffness of the neck. During the past week pain developed in the right mastoid region which has increased, so that she cannot bear the slightest touch. There has also been some pain in the left ear, but no discharge. Aural condition; offensive discharge containing cholesterin crystals. Large defect in the drum, cholesteatomatous masses protruding from the attic. The left ear; entire loss of drum; no discharge. Patient observed one week. During this time temperature normal and no pulse changes, but the mastoid tenderness did not lessen. The patient finally consented to operation and was operated on July 6th. There was found marked necrosis of antrum extending to the lateral sinus, the antrum filled with broken down cholesteatomata, these extending through the additus into the middle ear cavity. The mastoid tip cells were large and necrotic. On July 16th pain developed in the left mastoid process, with tenderness over the antrum and tip and despite treatment increased. On July 19th operation on left mastoid. Cortex of mastoid necrotic, the entire external plate being soft like putty. The necrosis extended to zygomatic and tip cells, the inner plate was soft and when removed the lateral sinus was exposed. Above, the necrosis extended to the dura. Both ears are at present completely healed and the patient has at no time had recurrence of the headache. This case is undoubtedly one which had been going on for some considerable time and one in which a careful examination would have brought about an earlier recognition of the condition.

In citing these cases we have given only those portions of the records which we have felt had a direct bearing upon our subject. The literature is full of similar cases, which demonstrate the great importance of the careful examination of patients suffering from chronic otorrhoea. In a former paper, read before the Germantown Medical Society some years ago, we recorded a series of cases of this kind and a large number of other personally operated cases could be cited, in which the

gravity of the condition was not suggested by any symptoms given by the patient but by symptoms gained from a rigid subjective examination and the searching for objective signs.

SOME INTRA-NASAL CAUSES OF HEADACHE.

BY

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(Read before the Wilmington Homœopathic Medical Society).

Far more attention has been given to the subject of headaches from ocular defects (*i. e.*, eyestrain due to refractive and muscular errors), in this country and Great Britain than on the continent of Europe; on the other hand greater attention has been given to the subject of headaches from intra-nasal causes on the continent of Europe than in the United States and Great Britain. Under these circumstances it is only natural that we should excel in the recognition and correction of ocular defects while they on the continent should excel us in the recognition and correction of the intra-nasal causes of headaches. That these conditions do exist is apparent to anyone who has had the opportunity of doing work in both places.

The medical profession educated in this country is well aware of the frequency of eyestrain as a cause for headache; while but few are aware of the frequency of the intra-nasal causes. The intention of the writer, therefore, is not to dwell further upon the subject of eyestrain, with which you are more or less familiar, but rather to point out some of the more frequent intra-nasal causes of headache of which you are perhaps less familiar. Among these are:

Acute Colds in the Head.—Headache associated with acute cold in the head may be due to one of two causes:

(A) Toxaemia, from the absorption of bacterial toxins which produces the associated fever of which headache is but a symptom.

(B) To actual local inflammation (hyperaemia and swelling of the mucous membranes of the nose and accessory sinuses).

Congestion and swelling of the mucous membrane of the

sinuses occur in every severe attack of acute rhinitis. It produces the headache which is associated with the sense of fullness, throbbing and tenderness over the area of the affected sinus. The symptoms correspond more frequently with those produced by Belladonna, altho any other remedy that is indicated, may be useful. The group of symptoms associated with congestion or beginning inflammation of a sinus usually abate with the abatement of the inflammation in the nasal cavity proper. However, in a few cases where the sinusitis continues the headache becomes more severe and often of the neuralgic type.

In the most severe cases of sinusitis where the secretion becomes purulent, the patient suffers extremely with deep-seated boring pains and sense of weight in the affected sinus while the nose feels stuffy because of the collateral oedema which follows, and there is often some swelling of the periosteum externally, due to venous stasis or to an actual periositis. Tenderness on percussion or pressure of finger is marked. In addition the patient has an elevation of temperature. This is a secondary fever, a fever which occurs at some time subsequent to the recession of temperature after the primary infection of the nasal cavity. The majority of cases of severe headache and neuralgia following influenza are due to this cause.

Symptoms of congestion are generally aggravated when the part is depressed and ameliorated when elevated. Characteristic of the symptoms of inflammation of the sinuses is that they are aggravated after lying down, and ameliorated a few hours after getting up. The cause of the aggravation and amelioration in the case of purulent sinusitis is due not alone to congestion but to the anatomical arrangement of their openings (ostea) which causes them to drain poorly when lying down and favorably when the head is elevated or tilted slightly forward.

Acute Sinusitis has been spoken of already under the heading "Acute Colds in the Head," and needs no further discussion now.

Chronic Sinusitis is the sequella of an uncured attack of acute sinusitis or repeated acute attacks at close intervals. These patients suffer periodical attacks of headache which are less severe than those found accompanying the acute form.

These patients ordinarily, when the amount of discharge is not profuse and when the orifice is sufficiently large to take care

of the drainage, do not suffer intensely. They may, in fact, they usually do, complain of a sensation of fullness after lying down for several hours. When the secretion is more profuse the patient usually suffers in proportion. Headache may come on a short time before the patient gets up in the morning, and continue for a few hours after. During an acute exacerbation following a fresh cold, the swelling of the mucous membranes about the orifice may so interfere with the exit of the secretion, which at the same time has been increased, that the patient suffers quite as much as during an acute attack.

Patients with chronic empyema of an accessory cavity usually have associated other permanent changes in the nose, the more frequent of which are circumscribed hyperplasias and polyps. These associated conditions may in themselves give rise to headache independent of the chronic empyema. This brings us to the subject of hyperplasias.

Hyperplasia.—Diffuse hyperplasia, secondary to chronic catarrh, rarely gives rise to much headache, but may produce a sensation which the patient describes as a dullness or fullness in the head. At all events, after their removal the patient invariably speak of the relief of this unpleasant sensation of fullness in the head.

Pronounced Circumscribed Hyperplasia of the middle turbinate is a very frequent cause of dull headaches which are promptly relieved by the removal of the hyperplasia. They produce headache because of the pressure on the septum and the lateral wall of the nose. The venous circulation in a hyperplasia is rather impaired and the result is that when the head is lowered hyperplastic tissue is prone to become oedematous, so that the symptoms are aggravated when lying down and relieved some time after sitting up. Again they are characteristically ameliorated after the local application of substances which cause temporary shrinkage of the parts (cocaine or adrenalin).

Polyps are nothing more than hyperplastic tissue which has become markedly oedematous and pedunculated. Polyps may be found originating from almost any part of the nasal cavity but the sites of predilection are the region of the hiatus semilunaris and the recessus spheno-ethmoidalis, *i. e.*, about the orifices of the various accessory sinuses. Besides the impaired nasal breathing the patient with polyps usually suffers with dull headaches. When the polyps are associated with active sinusit-

is the patient may suffer in addition to the dull headache a more severe headache, belonging particularly to the sinusitis.

Excessive Scrolling of the Middle Turbinate.—This condition is one in which the scrolling of the middle turbinate is so marked that the free edge extends beyond the normal limits; in some cases so far even as to form a pocket on the concave side.

Rhinoscopic examination shows an enormous width of the visible part of the middle turbinate. There is practical obliteration of the middle meatus and the turbinate extends from the septum to the lateral wall with contact at both places. It is found to be of firm consistence and is resistant to the pressure of the probe. The branches of the anterior and posterior ethmoidal nerves are pressed upon, which gives rise to severe neuralgic headaches and to occasional reflex neuralgia on the corresponding side of the head.

The only successful treatment can be the removal of that portion of the middle turbinate which causes the pressure on the nerves.

Dilated Ethmoidal Cells Extending Into the Middle Turbinate, also known as cyst of the middle turbinate. This like the former condition is an anatomical abnormality. There is a cell belonging to the ethmoid group which extends downward between the two lamina of the middle turbinate. The rhinoscopic appearance and the symptoms are similar to those of excessive scrolling, because of which the two conditions have been confused. Since the treatment in both conditions is the same, however, it makes but little difference if the diagnosis is not made until after removal.

Some of my most brilliant successes in the treatment of neuralgia have resulted from the removal of such cysts. Three specimens of which are here shown.

Deviations of the Septum may, but do not necessarily give rise to headache from pressure; however, when complicated with any of the conditions mentioned above it may act as a contributing factor. The higher the deviation and the more pronounced it is the more it is liable to give rise to headaches or neuralgia.

We shall close our paper with a few illustrations of the conditions mentioned.

PRINCIPLES OF COMPLEMENT FIXATION; AND A COMPARISON OF THE
WASSERMANN AND NOGUCHI APPLICATIONS, IN THE SERUM
DIAGNOSIS OF SYPHILIS.

BY

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(Read before the Clinico-Pathologic Society, May, 1910.)

MUCH has been written recently regarding the Wassermann reaction, and yet, while considerable interest and recognition has been shown it by the profession in general there still seem to be many points of detail apparently vague to those not directly interested in laboratory work.

While a satisfactory explanation of the phenomenon as yet remains unaccepted, for the sake of clarity, one may easily acquaint oneself with a thorough understanding of the *modus operandi* of the reaction by applying to it the Ehrlich theory. If to the initiated this may appear elementary its results shall have been obtained.

It has been learned that certain substances, when introduced into animals, are capable of stimulating the production of antibodies to themselves, in this animal. These antibodies, in this case, are known as *amboceptors*; while the substances which stimulate their production are known as *antigens*. It was at first thought then, that these amboceptors directly neutralized the poisons, as bacterial antigen in disease, and that thus a variety of immunity or cure could be explained; it was later found, however, that before these poisons could be destroyed, a third substance was necessary to complete the reaction, and this substance is therefore known as *complement*.

We have then three substances:

Antigen, a substance capable of stimulating the production of an *amboceptor* to itself in vivo, and a third substance, present in all sera, *complement*. The presence of these substances, at the same time produces a constant result, namely: a firm union of all three (*fixation*). Antigen unites with amboceptor and complement with these, we have, therefore: (*antigen* + specific *amboceptor*) + native *complement* = a constant reaction.

When a germ enters the living body, nature at once produces amboceptors for that particular germ and the reaction that results is:

Bacterial *antigen* + (its specific) bacterial *amboceptor* + (native) *complement* = fixation or destruction of bacteria (bacteriolysis).

But bacteria are not the only antigens capable of stimulating the production of amboceptors, for it has been found that alien red cells, when injected into animals, also result in the production of their own amboceptors, giving us another reaction, precisely the same as that above.

Red cell *antigen* + red cell *amboceptor* + *complement* = destruction of red cells (hemolysis), a reaction which, due to the liberated hemoglobin, is a grossly visible one.

It will at once be noted that each antigen must have its own amboceptor, to balance the reaction, but that the same complement will operate for all; therefore, since complement is always the same, provided we know a second substance, the third factor in the equation can be identified; and this is just what the Wassermann reaction does in syphilis. By mixing in a test tube the proper antigen, a known amount of complement, and the patient's serum, then if the patient is luetic his serum must, therefore, contain syphilitic amboceptors, and we have Syphilitic *Antigen* + Syphilitic *Amboceptor* + *Complement* all uniting in a firm *Fixation*. To demonstrate that this combination really takes place, we have only to add to this mixture a red cell antigen + a red cell amboceptor and there being no unused complement remaining to unite with these, no hemolysis takes place. If, however, the patient is not luetic there can be no syphilitic amboceptors present to complete the first equation, and complement is left free (*unfixed*) and can unite with red cell antigen + red cell amboceptor to produce a visible hemolysis.

It must now be clearly seen that the blood cell system is used simply as an *indicator* for the syphilitic system, and so by showing *fixed* or *unfixed* complement, the syphilitic or non-syphilitic nature of the patient's serum.

It is to be hoped that from this short explanation a better understanding of the phenomenon of complement fixation may be acquired, and so I shall not further complicate it by showing the non-specificity of artificial antigens nor the variance of the action of amboceptors in vitro from those in vivo; differences of function or even identity which may be so entirely distinct from those at present accepted, as to materially alter our concepts of the reaction.

The principles of the Wassermann and Noguchi reactions are precisely the same as that given above, their degree of difference being simply in the application. Instead of using the anti-sheep hemolytic system of the original Wassermann, the Noguchi modification employs human blood in the hemolytic system; thus simplifying the technic as well as removing the uncertain factor of natural anti-sheep amboceptors, present in some sera. Aside from this the reagents are nearly the same, though used in smaller quantities than in the original method. The recommendation of using these in dried form on paper as an advantage, is of doubtful value; as the most important one (complement) cannot be used thus, antigen deteriorates probably as rapidly in dried as in liquid form, while amboceptor in any condition is a very stable body. We have also found that much more reliable results may be obtained with this modification by using the reagents in definite volumes of fractions of c.c., the very delicacy of the test alone precluding the use of such uncertain quantities as "drops," "squares of paper" or vest pocket thermostats; only by absolute accuracy in using the reagents in constant volumes can comparable results be obtained.

Reagents and technic of Wassermann reaction, and Noguchi modification.

Antigen, this the most important as well as the most uncertain factor in the test, is now most commonly accepted as a lipoid extraction of various organs, usually liver and preferably a syphilitic one; although the difference between a syphilitic and non-syphilitic organ extract is usually a quantitative rather than qualitative one.

Of the many preparations recommended, the one which has probably given us the most reliable results is the saline emulsion of acetone insoluble alcoholic extracts. This is prepared by extracting the ground organ with absolute alcohol for several days, at 37 degrees C. filtering and evaporating the resulting mass is then taken up with ether and fractioned in a large quantity of acetone and preserved in this condition in a dark, air-tight jar. As needed, a small quantity of this precipitate is evaporated and dissolved in a portion of ether and made into a .2 per cent. emulsion of carbolic (.5 per cent) salt solution (.85 per cent), in quantity sufficient for two or three weeks use. Each preparation must be titred with known syphilitic and normal sera, and the greatest quantity which

completely inhibits hemolysis in the presence of syphilitic serum and yet has no anti-complementary action with normal serum is used. For the Wassermann this is usually between 0.1 c.c. and 0.2 c.c. For Noguchi from 0.05 c.c. to 0.15 c.c.

Patient's serum. Sufficient quantity for either test may be collected in two large Wright capsules in the usual manner from the ear. It is, however, more desirable where possible to withdraw 5 or 6 c.c. of blood from a prominent vein and allow to clot in clean test tube. The clear serum is then inactivated by heating to 55 degrees C. in a water bath for 30 minutes. Quantity used: For Wassermann 0.1 c.c. to 0.2 c.c.; for Noguchi 0.05 c.c. to 0.1 c.c. Sera of a normal and a known luetic are treated and used in like manner in the negative and positive controls respectively.

Complement. Fresh guinea pig's serum, of known complementary content. Quantity used: Wassermann 0.1 c.c.; Noguchi 0.05 c.c.

Suspension of blood corpuscles. For Wassermann a 5 per cent. emulsion of washed sheep corpuscles in .85 per cent. saline solution is used. For the Noguchi washed human blood cells in the proportion of one drop to one and half c.c. saline is used. This double strength being necessary according to the technic given below.

Hemolytic Amboceptor. This is the antibody to alien red cells produced in an animal of another species (rabbit) and is the result of repeated injections of washed cells into the animal in increasing doses. For the Wassermann fresh sheep cells are used, while for the Noguchi modification again human cells are employed; these cells are washed four times in a large quantity of saline. The first dose being about 2.5 c.c. to 5 c.c., later injections (intraperitoneally) at intervals of five or six days are repeated up to 18 or 20 c.c.; at this time a small amount of blood may be withdrawn from a vein and the antibody content titred, when sufficiently high, 0.0025 c.c. to 0.005 c.c., the animal is etherized and killed and the serum collected. This is best preserved by desiccation over acid at a temperature below 40 degrees C., finely powdered and kept in a sealed dark tube; in this state it seems to keep indefinitely, and from which it may be made up in saturated solution and subsequent dilutions in carbolic saline in quantities sufficient for a fortnight's work. Double the smallest quantity, which

is necessary for complete hemolysis in one hour with the sheep or human cell system, is used in the respective methods.

CHART I.

TECHNIC WASSERMANN REACTION.

RESULTS.	Tubes.	Antigen Titrè=0.2 cc.	Patient's Serum, (55°c.)	Known Syphilitic Serum, (55°c.)	Known Normal Serum, (55°c.)	Complement, 50% dil.	The volume of each tube is now brought up to 4 cc. with saline and incubated at 37°c. for 1 hr.	Sheep Blood Suspension, 5%.	Hemolytic Amboceptor Titrè 0.005.	Incubate at 37°c. until hemolysis is complete in all control tubes except No. 3. Place in ice box over night.	Non-Syphilitic —	
											Syphilitic +	Inhibition.
Test	1 Front	2 cc.	2 cc.	2 cc.	2 cc.	1 cc.	1 cc.	1 cc.	0.1 cc.	0.1 cc.	Inhibition.	Hemolysis.
Set	2 Rear	2 cc.	2 cc.	2 cc.	2 cc.	1 cc.	1 cc.	1 cc.	0.1 cc.	0.1 cc.	Hemolysis.	Hemolysis.
Positive	3 Front	2 cc.	2 cc.	2 cc.	2 cc.	1 cc.	1 cc.	1 cc.	0.1 cc.	0.1 cc.	Inhibition.	Inhibition.
Control Set	4 Rear	2 cc.	2 cc.	2 cc.	2 cc.	1 cc.	1 cc.	1 cc.	0.1 cc.	0.1 cc.	Hemolysis.	Hemolysis.
Negative	5 Front	2 cc.	2 cc.	2 cc.	2 cc.	1 cc.	1 cc.	1 cc.	0.1 cc.	0.1 cc.	"	"
Control Set	6 Rear	2 cc.	2 cc.	2 cc.	2 cc.	1 cc.	1 cc.	1 cc.	0.1 cc.	0.1 cc.	"	"
Hemolytic	7 Front	4 cc.	2 cc.	2 cc.	2 cc.	1 cc.	1 cc.	1 cc.	0.1 cc.	0.1 cc.	"	"
Control Set	8 Rear	2 cc.	2 cc.	2 cc.	2 cc.	1 cc.	1 cc.	1 cc.	0.1 cc.	0.1 cc.	"	"

CHART II.

TECHNIC NOGUCHI MODIFICATION.

RESULTS.	Tubes.	Antigen Titrè=0.1 cc.	Patient's Serum, (55°c.)	Known Syphilitic Serum, (55°c.)	Known Normal Serum, (55°c.)	Complement 50% dil.	The volume of each tube is now brought up to .5 cc. with saline and incubated for 1 hour at 37°c.	Human Blood Suspension, (1 drop to 1.5cc.)	Hemolytic Amboceptor, Titrè 0.0025.	Incubate at 37°c. until hemolysis is complete in all control tubes except No. 3. Place in ice box over night.	Non-Syphilitic —	
											Syphilitic +	Inhibition.
Test	1 Front	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	0.005 cc.	0.005 cc.	Inhibition.	Hemolysis.
Set	2 Rear	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	0.005 cc.	0.005 cc.	Hemolysis.	Hemolysis.
Positive	3 Front	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	0.005 cc.	0.005 cc.	Inhibition.	Inhibition.
Control Set	4 Rear	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	0.005 cc.	0.005 cc.	Hemolysis.	Hemolysis.
Negative	5 Front	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	0.005 cc.	0.005 cc.	"	"
Control Set	6 Rear	2 cc.	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	0.005 cc.	0.005 cc.	"	"
Hemolytic	7 Front	2 cc.	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	0.005 cc.	0.005 cc.	"	"
Control Set	8 Rear	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	1 cc.	0.005 cc.	0.005 cc.	"	"

It is evidently important, in either reaction, to use only double that quantity of amboceptor necessary for complete hemolysis of constant volumes of cells in one hour; and to remove the rack just as soon as hemolysis is complete in all control tubes, except the positive control with antigen, to stop further action and allow sedimentation in the ice box. Use only inactivated serum, and the exact dose of that antigen which has recently been titred and found reliable; and if possible use various strengths of sera with known doses of antigen, such modification may be easily carried out and help to give better ideas of the inhibitory strength of various sera and tend to more reliable results.

Any present method of performing the complement deviation reaction, at best requires, of the operator, constant attention in keeping the reagents well balanced, to insure a faultless technic; so by eliminating the above uncertainties, with other minor details of technic of the Noguchi modification, I am unable to agree with those investigators who object to this method *per se*. It is certain that we have had more consistent results with this system while it is, furthermore, a more sensitive system and an easier and quicker method than the original. The use of inactive serum seems to have eliminated the principal objection of occasional positive findings in non-specific cases. We, therefore, feel justified in using the Noguchi modification as routine, doing two separate tests; it being possible to use both systems in comparison, when necessary.

I have had occasion to follow the entire course of several cases, dispensary and private, from the early initial stage through the apparent course, noting the onset of the reaction, its rise and decline. The reaction appears in the second or third week of the chancre and rapidly rises to its acme in the height of the secondary manifestations. Serum containing as many as 8-10 antibody units to the capillary drop were found at this time.

Dr. Hunsicker reports that when positive reactions were obtained in doubtful cases, subsequent clinical developments frequently substantiated the reaction; also that the decline of the reaction in those cases submitting to the vigorous therapeutics was in notable contrast to the negligent cases.

I am unable to state the prognostic value of the test.

I have also followed one case (H. 860), a moderate though

typical infection, in which repeated examinations in every stage failed to give a positive reaction. One case (S. 963) gave hemolysis in 20 minutes with two units of serum, but not with one, without immune serum, the isohemolysins and agglutinins which were also marked, however, were transient.

Our observations are based on the result of 326 examinations of sera from various sources.

Results of 240 examinations by the Noguchi modification using active sera:									
Primary Syphilis	No. of cases	29	Positive	.....	24	Negative	.....	4	Doubtful
Secondary Syphilis	No. of cases	38	Positive	.....	33	Negative	.....	2	Doubtful
Tertiary Syphilis	No. of cases	19	Positive	.....	12	Negative	.....	3	Doubtful
Suspected Syphilis	No. of cases	57	Positive	.....	21	Negative	.....	31	Doubtful
Chancroid and other Venereal Diseases	Cases	54	Positive	.....	2	Negative	.....	48	Doubtful
Non-Syphilitic	Cases	43	Positive	.....	2	Negative	.....	40	Doubtful
Results of the examination of 86 cases, using both Wassermann and Noguchi methods with inactivated sera:									
Primary Syphilis	No. of cases	15							
Wassermann—	Positive	10	Negative	.....	3	Doubtful	.....	2	66.6%
Noguchi—	Positive	11	Negative	.....	1	Doubtful	.....	3	73.3%
Secondary Syphilis	No. of cases	19							
Wassermann—	Positive	17	Negative	.....	1	Doubtful	.....	1	89.5%
Noguchi—	Positive	18	Negative	.....	1	Doubtful	.....	0	94.7%
Tertiary Syphilis	No. of cases	15							
Wassermann—	Positive	7	Negative	.....	5	Doubtful	.....	3	46.6%
Noguchi—	Positive	9	Negative	.....	2	Doubtful	.....	4	60.0%
Suspected Syphilis	No. of cases	14							
Wassermann—	Positive	.....	2	Negative	.....	9	Doubtful	.....	3
Noguchi—	Positive	.....	2	Negative	.....	11	Doubtful	.....	1
Chancroid	No. of cases	11							
Wassermann—	Positive	.....	0	Negative	.....	11	Doubtful	.....	0
Noguchi—	Positive	.....	0	Negative	.....	9	Doubtful	.....	2
Non-Syphilitic	No. of cases	12							
Wassermann—	Positive	.....	0	Negative	.....	12	Doubtful	.....	0
Noguchi—	Positive	.....	0	Negative	.....	12	Doubtful	.....	0

[I am indebted to Dr. G. A. Hopp, and to a grant from the Clinico-Pathologic Society for assistance.]

EDITORIAL

THE ROLE OF THE HOMŒOPATHIC PRACTITIONER IN THE UP-BUILDING OF OUR HOMŒOPATHIC MEDICAL SCHOOLS.

FEW Homœopathic practitioners realize the importance of the part they can play in helping to up-build our homœopathic colleges. There has been a small but gradual decrease in the number of students in the homœopathic medical schools for the past four or five years, and this has called forth the statement on the part of our "old school" friends that our homœopathic institutions must sooner or later close their doors. This, however, can never take place if the great body of homœopathic practitioners throughout the country are willing to lend their active and enthusiastic support to the various institutions from which they have graduated. The co-operation of the profession, therefore, means to our educational institutions a brilliant future, while antagonism or apathy on the part of the profession means their failure.

There are several reasons why this is true, but we will merely call attention to a few of the more important ones. In the first place, young men who contemplate entering a medical college are frequently attracted to the "old school" institutions because of the wide notoriety many of these institutions enjoy on account of their participation in foot-ball and other athletic sports. As a result of the newspaper publicity thus given, the names of many of the larger "old school" medical colleges become so well-known to the great bulk of prospective medical students that their thoughts naturally turn to them when the question of selecting an institution in which they will pursue their medical studies arises; in other words, they enjoy the distinct advantage of being well advertised.

Again, the prospective student is likely to be influenced by the views and conduct of his friends and intimate associates. When he learns that most of the men with whom he is acquainted have determined upon matriculating as students in an "old school" institution, he is very likely to follow their example.

Many young men hesitate to enter a homœopathic school because they are told that by so doing they are limiting themselves to a narrow sectarian branch of the medical profession. It is also urged upon them that such a step excludes them from future appointments to the medical service of the United States army and navy, from positions in connection with insurance companies, and other public and private positions that demand men of medical training.

All of these influences unquestionably tend to influence young men against entering homœopathic colleges, and the homœopathic practitioner who has the personal acquaintance-ship and the confidence of the prospective student is the only one who can correct these misconceptions and can place before him the true facts. No amount of literature or of announcements that can be forwarded him from homœopathic colleges can exert anything like the influence that would result from a few words of sincere and kindly advice on the part of the family doctor.

There may be homœopathic physicians who fail to see any substantial reason why they should endeavor to solicit students for our colleges. Such men, however, have either given very little thought to the matter at all, or they fail to have the interests of homœopathy at heart. It requires no argument to prove that the future of the homœopathic school depends upon our constantly obtaining new recruits to our cause. Some of these new recruits come to us from the "old school," but by far the greatest additions to our ranks come from that group of young men who are graduated each year from our homœopathic colleges.

We believe also that a careful consideration of all the facts will bear us out in the statement that the interests of the average young man who contemplates the study of medicine will be best advanced by his entering a homœopathic institution to obtain his medical education. We say this first, because it will open up to him a better opportunity to earn a competent living. This may be a low motive, but it is nevertheless a very practical one. The average earning capacity of physicians of the "old school" is much below that of the average earning capacity of homœopathic physicians; and not only is this true, but their ranks are being so rapidly recruited each year that the average income of practitioners of the dominant school is steadily diminishing. The therapeutic nihilism

which prevails among them has also hastened this condition, because the lack of faith which they have in their therapeutic measures has finally communicated itself to the public, with the result that large numbers of profitable patients have deserted the "old school" for Osteopathy, Christian Science and kindred methods of treatment. Secondly, a properly equipped homœopathic college is prepared to give a man a more complete and better rounded medical education than are the "old school" institutions. The latter voluntarily confine their instructions to a certain particular branch of the therapeutic art, while an up-to-date homœopathic school not only teaches all in the way of general clinical medicine and of applied therapeutics that the "old school" institutions teach, but adds to this a thorough, comprehensive course in the only method of drug therapeutics known to-day that is based on a scientific law of cure.

It is a fallacy to suppose that the requisite knowledge of homœopathy can be obtained by the student taking his degree at an "old school" institution with perhaps one year of post-graduate work at a homœopathic college. Experience shows that the majority of students who contemplate such a step seldom pursue their studies any further after obtaining their diploma from an "old school" college. Even should they attempt to take up the study of homœopathy by means of a brief course of lectures, experience has shown that their minds are so thoroughly saturated with the principles of empirical medicine or of therapeutic nihilism that it becomes difficult or even impossible for them to properly comprehend the application of a scientific law in drug therapeutics. Athletic trainers tell us that they would prefer to take a man who was entirely unacquainted with rowing and teach him the proper stroke for racing, than to take a man who had been accustomed for years to rowing in an improper manner and try to train him into the use of a more effective stroke. The same holds true in regard to medical students, and it is easier to take a man in the beginning and train him properly and thoroughly in the homœopathic art of treatment, than it is to endeavor to instruct a man whose previous teaching and experience leads him to be antagonistic and unreceptive to the doctrines of homœopathy.

There are many homœopathic doctors who excuse themselves from taking any active part in soliciting students for homœopathic schools on the ground that their influence is

very limited. This, however, is not true. No man's influence is negligible who is capable of gathering around him a clientele of patients sufficient to insure him a good living. All that is necessary is that every practitioner should do his share, and whether his influence be great or small, it is his duty to exercise it as far as he is able. It is not the work of one man that counts—it is the work of a large body of men working together for a common purpose. For example, the Hahnemann Medical College, of Philadelphia, has graduated over twenty-six hundred homœopathic physicians. It is probable that about twelve hundred of these men are actively engaged in medical practice to-day. If each practitioner sent one student to the college every four years there would now be matriculated in this institution twelve hundred students instead of three hundred. Again, students who are sent by their family physicians in turn influence other prospective students to matriculate. We would estimate that matriculates from this source would add about ten per cent. to those that are sent by doctors. If the college graduated three hundred students each year the number of the alumni would soon be largely increased, and if the new graduates were as loyal as we have assumed the old to have been, the increase in students would be progressive, and the future of the institution assured beyond all doubt. These figures, it is true, may seem beyond the fondest hopes or expectations of all, but even if they are beyond the realm of possibility, they serve to illustrate in a striking way the effect that the co-operation of each individual homœopathic physician would have in adding to our student body.

There are many ways in which the general practitioner can influence students to matriculate in homœopathic colleges. The most evident of these, perhaps, is by talking to the young men in the community who contemplate taking up the study of medicine, and by impressing upon them the advantages of the homœopathic institutions. A confidential talk with the parents of these young men, also, would tend to influence them favorably toward sending their sons to homœopathic schools. The general practitioner could also perform an inestimable service to the homœopathic colleges by sending to them the names of any possible students in the community in which he lives. This would enable the colleges to forward literature and other data which would be of interest to the prospective student.

And, last of all, the doctor should endeavor by his daily talk and contact with his patients to build up a spirit of loyalty and enthusiasm for the cause of homœopathy and its institutions. Work of this kind is beneficial to the doctor himself as well as to the homœopathic colleges. Enthusiasm begets enthusiasm, and the patients of such a doctor become more loyal to him and to the cause of homœopathy, and they in turn influence new patients to try the efficacy of the homœopathic method of treatment. Thus the doctor's interests are broadened, his practice is increased, and in later years he has the satisfaction of receiving the thanks and the regard of the young men he has started on a career of professional usefulness and success.

MEDICAL MEN AS LIARS.

THAT the public look upon medical men, as a class, as liars, is an unfortunate but, nevertheless, well proven fact. The editor was forcibly impressed by this quite recently when he read the following statement on the bulletin board of a well-known Philadelphia newspaper: "Physicians brand as false the rumors that Mayor Gaynor is dying." The fact that the physicians in attendance upon Mayor Gaynor found it necessary to make such a positive statement to back up the daily and almost hourly bulletins that have been issued by them regarding the Mayor's condition shows that the public in general did not take the official statements issued by them as reliable guides as to the Mayor's condition. Personally, we were inclined to place a reasonable amount of confidence in the bulletins that were issued in connection with Mayor Gaynor's case, and yet it is easy to understand the skeptical attitude of the public in this matter.

It may be that Mayor Gaynor's physicians, all of whom are men of high professional standing, felt somewhat offended when it was intimated to them that the public did not accept their statements as truthful; but they must remember that only a few months have elapsed since physicians of equal prominence repeatedly assured the public that Mr. Edward H. Harriman, the prominent railroad magnate, was suffering from nothing more than an attack of nervous prostration, and even persisted in publishing reports, or what purported to be

reports emanating from them to that effect, up to within a few days of his death. Then it became common knowledge that Mr. Harriman had been affected with a serious and, in fact, fatal malady for many months prior to his death. We do not pretend to sit in judgment on Mr. Harriman's physicians, nor are we prepared to say what motives may have influenced them in their conduct; but we do know that it is such conduct as this on the part of physicians that has led the public in general to disbelieve or to discount any statements they may make regarding the condition of any public man. Probably one of the most notable examples of this lack of confidence in the statements of physicians was exhibited at the time King Edward VII was operated on for appendicitis. The bulletins issued by his medical attendants at that time stated the absolute truth, and yet the brokers on the London Stock Exchange and the great mass of people throughout England gave no heed whatever to the bulletins thus issued, it being the general belief that the King was affected with cancer, and that the physicians, in accordance with their usual custom, in such cases, were endeavoring to conceal the true facts.

To what extent lying is justified on the part of physicians is a much mooted question. Most of us were brought up, medically speaking, with the idea that a doctor was justified in lying when it seemed to be necessary for the benefit of the patient. Personally, we are firmly convinced that this policy in the long run is prejudicial both to the welfare of patients, of the individual physician, and of the profession as a whole. The discredit into which it has brought the medical profession is only too frequently evidenced in cases similar to those previously referred to.

In the case of individual physicians the same unfortunate results occur, but in a less striking form. Absolute confidence should be the basis of all proper relations between physician and patient, and this confidence cannot exist if the patient knows that the physician intends to make false statements whenever he believes it is for the patient's good for him to do so. We do not contend that it is the physician's duty to be constantly terrifying his patient by needlessly explaining to him all of his worst conjectures regarding the outcome of his illness. Where the physician is in grave doubt as to whether the outcome will be unfavorable or not, the patient should be given the benefit of the better rather than of the

worse prognosis, and there are instances in which the physician is justified in evading a complete and positive answer to his patient's questions; but never, in our opinion, do the best interests of the patient or of the physician demand that absolutely false statements should be made.

This question of professional honesty is one which should demand the serious attention of all medical men. The profession is now passing through a critical period of its history; it has lost a great deal of the traditional confidence of the people, and it is essential that we should conduct ourselves both individually and as a class in such a way as to command the confidence and the respect of the public. Nothing, in our opinion, is more calculated to restore this confidence than absolute fairness and honesty. This, we believe, is a fundamental necessity, and we trust that the suggestions that have been made here may call forth some discussion that will lead to a readjustment of the traditional views of medical men regarding this subject.

THE COMING MEETING OF THE STATE MEDICAL SOCIETY.

THE Homœopathic Medical Society of the State of Pennsylvania will hold its annual session at the Park Hotel, Williamsport, on September 20th, 21st and 22nd. The indications are that the meeting will be a very successful one. The program is well filled with a list of interesting and practical papers, and the scientific portion of the meeting will undoubtedly be up to the standard of former years.

President Schantz has been very active in visiting homœopathic societies in all portions of the State, and has exerted every effort to enlist the support of the profession in making the meeting a large and enthusiastic one. There will be a number of important business matters to come before the attention of the Society, and, in particular, the policy that the State Society shall take relative to the matter of medical legislation will have to be discussed and determined upon. There seems to be every reason to believe that we shall again be compelled to fight the old battle with the dominant school, whose policy it has been for many years to obtain for themselves absolute control of the power of granting licenses to the prac-

tice of medicine. That they have succeeded in most of the States of the Union is a well-known fact, and it is incumbent upon every homœopathic practitioner in Pennsylvania to voice his sentiments in this matter and to lend his support to whatever policy shall be determined upon as the most effective for conserving the rights and privileges of homœopathic practitioners and of future graduates of homœopathic institutions.

Those who were at Scranton last year will long remember the many pleasant social features connected with the meeting in that city. The profession in Williamsport are also exerting every effort to provide for the comfort and pleasure of visiting members, and the busy physician can well combine both profit and pleasure by attending the State Society meeting.

THE PLANTAR REFLEX IN INFANCY AND CHILDHOOD.—E. C. Fleischner has made a systematic study of the plantar reflex in a series of five hundred infants and children in order to determine the value of the Babinski phenomenon during this period of life.

In 1896 Babinski published his monograph describing the abnormal plantar reflex, encountered especially in meningitis and indicating a lesion of the pyramidal tracts and which is since universally known as "Babinski's sign." The sign consists in the extension of the great toe upon the metatarsus instead of flexion, which is normally produced by irritation of the plantar surface of the foot. Babinski, however, made the following exceptions: In newly-born infants the so-called infantile response is constant; in cases of complete transverse myelitis the plantar reflex cannot be elicited. In 1899 Collier described more fully the reflex observed in children under normal conditions and gave clear-cut indications for differentiating the normal adult plantar reflex, the normal infantile reflex and the Babinski phenomenon.

Fleischner sums up his observations with the following conclusions:

The most valuable results can be obtained on single stimulation. Repeated stimuli disturb the child and render the results unsatisfactory.

Babies should always have warm feet to get satisfactory results.

The outer side of the plantar surface should be stimulated, employing the lightest stimulation necessary to obtain the result.

Eighty-five per cent. of children under one year of age who could not stand showed the infantile reflex. Fifty per cent. over this age who could not stand showed the same phenomenon.

Of the children who could stand but not walk 75 per cent. showed the mixed infantile and adult type; in 5 per cent. the result was variable. Of those who could walk 55 per cent. showed the adult type, 40 per cent. mixed type and 5 per cent. the infantile type.

The Babinski phenomenon is practically of no value in infancy and childhood when the children cannot walk and is then only of value if one is cognizant of the reflex that was present before the disease process began.—*Archives of Pediatrics*, August, 1910.

C. SIGMUND RAUE, M. D.

GLEANINGS

DIET IN TYPHOID FEVER.—Gordon R. Hall, M. D., (*American Medicine*) is an ardent advocate of a liberal diet in the treatment of cases of typhoid fever. He states that in the earlier days of his medical work milk was practically the only food given these patients.

The milk diet came into general use some forty years ago, and acquired a firm footing with the medical profession.

Dr. Shattuck, of Boston, was one of the first in this country to break away from the established custom, and give a liberal diet. From 1886 to 1893 he found that of 233 patients carried on a milk diet, the mortality was 10%. From 1893 to 1902, of 246 patients upon a liberal diet, the mortality was 8.45%.

In 1895 Bushuyev gave very liberal diet to 80 patients, while his colleague kept 74 others on fluids, mostly milk. The mortality among those fed with the liberal diet was 10%, while 12.1% of the liquid-fed patients died. In 1897 Bushuyev treated 318 cases on solid diet, with loss of 8.2%. Previous hospital mortality had been 12.4%.

In 1897 Dr. Barrs, of England, reported 31 cases with three deaths; and the fatal cases were unable to take solid food. None of the cases taking solid food early, died. Much more testimony of the same kind could be quoted.

Having established the safety of a liberal diet, it is in order to view the shortcomings of a milk diet, and the superiority of the liberal one.

When a patient takes milk well it is an excellent diet, because it contains the essentials of a complete food, is easy to take, and is easily handled. It should never be given pure, but always diluted with lime or barley or oatmeal water, or be peptonized. Without the dilution, milk curds are likely to be found in the intestine, which are irritating to the ulcers and possibly productive of hemorrhage and perforation. Milk is a good culture medium. I have long been accustomed to cut off the milk whenever there was any considerable amount of abdominal distension. Milk is said to be poorly absorbed when the only article of diet, even in healthy adults. Forcheimer calculates that a well person weighing 120 pounds, resting in bed the whole 24 hours, requires 1925 calories. The feverish typhoid patients would require still more.

Two quarts of milk is about all a patient can take in 24 hours, continuously. These two quarts are a little less than 1,300 calories, 600 short of the normal need. Add to that the loss of muscular tissue as a consequence of fever, sometimes 1½ lbs. a day which must be compensated and it is estimated that the deficit in calories amounts to about 50% a day. Typhoid may require 2,800 calories.

This starvation diet, then, in no way renews the waste of the disease, but leaves the patient to become weaker and thinner as the poisons of the disease and the fever run their course.

What are the advantages of a liberal diet? Typhoid is a self limiting disease in that the fever disappears when the blood has in some way counteracted the bacilli and toxins which the system contains, and rendered it immune. Until such a time, and to hasten this time, the great effort should be to sustain the strength of the patient. It seems to be the general opinion of those who have used it, that the liberal diet does this. That the combined length of the disease and period of convalescence will be shortened, and the emaciation and weakness lessened, the comfort of the patient increased, and the death rate lowered.

The belief that hemorrhage and perforation would be more frequent with the liberal diet, has not been sustained. No greater per cent. of perforations has occurred.

What is to be considered a liberal diet? Referring again to Bushuyev I will detail the diet he employs in typhoid, which is the most liberal that I have seen.

At 7 a. m. a cup of tea and a roll. 8 a. m. 400 c. c. of liquid oat meal, wheat or barley gruel, with butter. At 9 a. m. one or two eggs boiled to suit the patient; 10 to 11 a. m., a glass of milk, half a cutlet and 160 grams of boiled meat. 12 to 12.30 p. m. 200 to 220 c. c. of soup, a cup of jelly, rarely preserves. 3 p. m. cup of tea and a roll. 6 p. m. cup of chicken or beef soup, semolina pudding or milk and a bit of chicken. 8 p. m. a glass of milk and a roll. During the night a cup of tea or coffee with milk, from 2 to 4 times, with from one to three ounces of wine or coffee and brandy in the morning.

Doesn't that read almost like a fairy tale? Yet hear what he says of it: "The general condition of the patient is far better than with milk, They are uncommonly wide awake at meals, even those very ill. Sit up in bed, beg for food, and eat with much satisfaction." I fancy that few of our neighbors venture as broad a diet, notwithstanding Dr. Bushuyev's confidence.

In the liberal diet, food is not urged upon the patient. He must take it willingly. Neither must there be a quick transition from a liquid to a liberal diet.

Since September 1st, I have been on duty at the Kings Co. Hospital, and since October 1st, also at the Brooklyn Hospital. I have had under my care in both places twenty-seven cases of typhoid up to November 1st.

A fairly liberal diet has been employed in most of the cases. For example: One man, 27 years old, received the following: At 8 a. m. cereal 3 oz., milk toast one slice, coffee 8 oz. At 10 a. m. soup 6 oz., one powdered cracker. At 12 m., poached egg on toast, and wine jelly 2 to 3 ounces. At 2 p. m., eggnog, 8 ounces. At 4 p. m. raw scraped beef one ounce in toast sandwich, and boiled rice 6 oz., with 2 oz. boiled custard over it. At 6 p. m. koumyss 6 oz. At 8 p. m. milk 6 oz. At 4 a. m. milk 6 oz.

Diet was varied in different cases according to conditions. In one case a scraped beef sandwich on one day, alternated with poached eggs on other days, with eggnogs every day or two, the rest of the food being cereals, pea or bean soups, beef juice, hard boiled eggs grated and mixed with powdered cracker, custard, jelly, junket and ice cream.

The only fatal case was a man who died the day after admission; an alcoholic, very ill for two weeks before coming in, but having remained

in bed, with dry tongue, tympanites, petechial spots, suppurative iridocyclitis, and temperature of 105° . He had milk and albumin water while he lived.

The liberal diet was given in 18 cases. In one case pure milk and albumin water. In another, milk for six days after admission, then liberal diet.

In all these cases except one the Widal was positive; and in that one rose spots, enlarged spleen and characteristic temperature assured the diagnosis.

In 27 cases the abdomens were distended in seven. Six were distended on admission. The seventh had been confined to diet of milk and vichy after entering the hospital. This was changed to a liberal diet, and the distention soon came down.

Two other cases were relieved by enemas. Another two cases were relieved, one in ten days and the other in a few days longer, without special medication or enemas, they being upon the liberal diet.

Out of 27 cases, 22 had no diarrhea; most required enemas. Of the rest, one had from 2 to 5 stools a day, some of the time, others fewer. Only one received drugs for this symptom. They became constipated afterwards. In all cases where diarrhea was present in those fed with the liberal diet, no change was made.

The tongues were dry on admission in six out of twenty-six cases. One of these dry tongues became moist in four days on a diet of milk diluted with water, whey, and gruels. One upon the liberal diet required 15 days, another 11. None of the tongues became dry after admission to the hospital.

I have taken the time from the probable onset, to the day when the temperature reached normal and did not go above normal thereafter more than a degree or so, as a measure of the length of the illness.

In those upon liberal diet, the number of days was 15 to 17 (2); 18 to 20 (4); there being more at twenty days than at any other limit, and more than half of them coming within 20 days. One case with relapse continued 43 days. One, kept entirely upon undiluted milk and albumin water, became normal in 48 days, including a relapse.

None of you can be more sensible than I of the error one would make in reaching fixed conclusions from these few cases, and from such facts as I have presented. No two cases may have the same susceptibility or the same amount of poisoning. Habits, character of previous treatment, absence of treatment for some days after the onset of the disease, and many other circumstances greatly impair the value of any classification of facts. Yet I have been interested in placing these cases side by side, and comparing them in my mind with cases seen in previous years. This has resulted in the following firm impressions:

1. That milk alone is not the best diet for typhoids.
2. That some such diet as I have outlined, is perfectly safe and more sustaining.
3. That there are fewer bad symptoms, such as dry tongue, distention of the abdomen and excessive diarrhea.
4. That the patients are more comfortable and better satisfied during their illnesses.

5. That convalescence begins rather sooner and the restoration is easier.
6. That probably there are fewer complications and deaths.

ETIOLOGY OF ACUTE EPIDEMIC PARALYSIS IN CHILDREN.—In the *Deutsche med. Wochenschrift*, No. 14, 1910, Drs. Krause and Meinicke offer proof that the acute epidemic paralysis of children is a transmissible or infectious disease. Rabbits were successfully inoculated with the virus obtained from a human exponent of the malady. After the death of the animals infected, their organs were employed in the further infection of healthy rabbits. The negative results obtained by other experimentors are due, in the opinion of Krause and Meinicke, to the fact that young rabbits of a certain breed are alone susceptible, requiring, furthermore, a very large inoculative dose, preferably administered by the intraperitoneal or intravenous route rather than the subdural. Continuation of this experimental work also demonstrated that the filtrable virus, both in man and in the infected animal, was present not only in the central nervous system but also in the vertebral fluid, the blood and the parenchymatous organs. Further, it is demonstrable in both patient and cadaver.

MODERN VIEWS OF THE ETIOLOGY OF NEPHRITIS.—The teaching of Maragliano has revived the doctrine of more ancient authors in this subject matter, namely: Every disturbance of the vitality of the anatomic units in tissues engenders cytolytic substances, further characterized by a destructive propensity for renal tissue, and which, in the structure of less resistant, even predisposed, kidneys, develop macrobiotic processes with all their anatomic and functional sequelæ. Hence, in renal affections (excluding the ascending type due to contiguity of tissue with its point of origin or passage in the ureter) the diseased organ serves as exponent for the morbid state of the entire system. The tissue changes develop a local symptomatology; the alterations in tissues, organs, functions provides the general symptomatology; the sum total of the trouble affords us the exponent renal affection.—Dr. Padoa (*De Morgagin*, 1909, Nov. 21).

EPITHELIOMA: FORMOL.—In a recent session of the Academie de Medecine, Paris, M. M. Hallopeau and Fumouze reported the successful development of pure commercial formol in the treatment of epitheliomata, a wet compress being applied to the affected area. The vegetating portion of the neoplasm is rapidly destroyed, becoming a very adherent scab. Three or four applications suffice for its removal, leaving only a membrane of healthy granulating tissue. The notable necrotogenic properties of formol may be used likewise in such growths as warts, cysts (hydatid), etc. The only disadvantage of this method of treatment is the pain, which, however, may be combatted by repeated injections of novocain (1½%). Since the time when the formol applications were first used, no cicatrices nor relapses have appeared. The treatment is indicated where the neoplasm covers an area less than a 5-cent piece; where no glands are adjacent, and when surgical assistance is refused.

ETIOLOGY OF CANCER.—Contributory to this subject of such universal interest, Theilhaber and Greischer (*Muench. med. Wochenschrift*, 1910, No. 10) note that *carcinoma uteri* is much less frequent in women of

wealth and in Jewesses than in the poor and in Christians. According to the mortality lists of Munich for 1907, 1908, 1909, *carcinoma mammae*, on the contrary, is far commoner in unmarried women (*virginal*), in the rich and in Jewesses, attributable to infrequent pregnancy and breast nursing, over-lacing, and to racial characteristics. According to Greischer, *cancer of the stomach* is commoner among the poor (*alcoholismus*); frequent in cookesses (sampling food at high temperature), whilst *rectal cancer* is oftener found among the wealthy (*constipation, hemorrhoids*) and in the predominant type in (German) officialdom. As a rule, *carcinosis* (including all organs) is a condition commoner among the rich, although, because of a less mortality from children's diseases, occupation-diseases and tuberculosis, members of this class more often attain great age. Cancer affecting all organs appears further along in life among the rich than where conditions of poverty prevail. The Jews, in general, develop *carcinosis*, or cancerous implication of all organs, at an earlier age than is the case with the Gentiles, the reason for which is, doubtless, the same as that governing greater prevalence of the disease among the wealthy classes. Cancer mortality in Munich was doubled within the last forty years, an increase which, in part, is actual and conditioned only by the markedly lessened mortality from children's diseases, typhoid, etc. The general death rate in Munich has, during this period (40 years) fallen from 40:1000 to 17:1000; hence the diseases of adult and senile life must have increased. In part, the augmentation of cancer mortality is deceptive and due, in a measure, to more exact diagnosis. In regard to the genesis of the affection, study of cicatricial tissues leads to some weighty conclusions and, according to F. Theilhaber, the development of cancer from scars is commoner than has been hitherto suspected. But large, wide cicatrices, broad scars from burns, or deep (as from mastitis, or those in persons with chronic disease (lues, luetic, endarteritis, tuberculosis, lupus, etc.), or scars from gastric ulcers, (probably because complicated with disease of the vascular channels or dermal scars in places where there is a minimum of healthy connective tissue (as in scars fixed to the underlying bone of the tibia, the skull); these highly dispose to the development of cancer. Trauma, as well as cicatrix, acts in this direction by disturbance of metabolism in mesodermal tissues. Where we find cancer, atheroma of the blood vessels is frequently present, even in young persons. Circumjacent to carcinomata in their beginning we often discover stenosis of the blood vessels (also in younger individuals). The reason for the proliferation of ectodermal tissue into the mesoderm is probably to be found in disturbance of the nutrition of the latter, which apparently protects itself by a sort of "inner secretion" from its cellular elements. This secretion, naturally, also passes into the blood and is injured by any disturbance in the metabolism of mesodermal tissues, frequently by cicatricial formation and by trauma; neighboring tissues or the blood itself then assumes, not rarely, a vicarious function. If, however, because of a general depression of vitality or because of old age, these substances or secretions are present in circumjacent tissues and in the blood in minimal quantity, and further, when because of atheromatosis or from stenosis of the blood channels due to other cause, they penetrate in still less degree into the mesodermal tissues, then conditions may develop that permit epithelium deeper ingress.

The reappearance of carcinoma after complete removal of all diseased tissue may, in part at least, be explained by the fact that the extensive scar-formation following operation creates, like any large cicatrix, a predisposition to cancer, which is further favored by the fact that the vascular stenosis so predisposingly effective in developing the primary cancer is also probably present, after operation, in the surrounding and delimiting tissues. In the period immediately following operation, such predisposition is very slight for the cicatrix at this time is still rich in vascular channels and cells, and, therefore, the growth of mesodermal tissue is favored and that of ectoderm impeded. It is only after a period of months that the cellular elements of the scar atrophy, a large number of the vascular channels obliterated; then, the ectoderm resumes its sway and carcinomatous proliferation begins anew. Therapeutically, an endeavor might, perhaps, be made to obtain from the mesoderm substances that should hinder the progress of the initial cancer or relapse after operation. It is questionable, too, if the modern radical removal of the growth, including the adjacent healthy tissue, be not injurious. For example, Shroder, thirty years ago, in 114 cases of uterine cancer in which the cervix only was removed as the seat of the morbidity, had, after four years elapsed, 96 surviving patients, among which were 19 radical cures. Of these 96 patients, there were surely many instances where extirpation of cancerous tissue was incomplete and in 18 cases, death occurred from the primary neoplastic process. If the hypotheses above mentioned, as to the causes of relapse, are correct, such relapse might, perhaps, be warded off by continuing a hyperemia of the cicatrix by the use of hot applications, Bier's method of stasis, cupping, electricity; in cancer of the uterus, hot irrigation of the vagina and ovarian preparations internally.

SECONDARY SYNDROME OF ASPHYXIA.—During the disturbances alleged to important physiological processes, we also find secondary phenomena of which neither experimentation nor clinics can easily place the role in evidence. It is only tardily that the complexity of the phenomena of uremia and of occlusion are recognized and the dissociation of their symptoms established. Alone or nearly so, the pathogeny of asphyxia has escaped this fragmentation, which Dr. Richet, Jr., has endeavored to produce.

He has undertaken a series of experiments with dogs, some bearing on the diminution of resistance of the animal to successive attacks of asphyxia the others on the troubles provoked by a prolonged asphyxia, without, however, entailing immediate death. The facts observed have allowed him to formulate the following conclusions:

"Asphyxia is a complex intoxication. Its effects do not disappear with it, but persist for a long time.

Side by side of the *passing, primitive, fundamental* intoxication, the *anoxhemia*, we must make a place for the *accessory, secondary, persisting intoxications*. These intoxications, hardly able to gain importance during the evolution of the asphyxia, are under the dependence of anærobic toxins, true sub-products of the asphyxia.

The *secondary asphyxial syndrome* determined by them is, above all, characterized by cerebral and bulbar troubles, and by a rapid death.

(a) The *cerebral troubles* are either *psychic* (torpidity, loss of the

psychic reflexes) or *motor* (contractions, convulsions, Jacksonian and general epilepsy, or paraphyria, titubation and catatonias).

(b) The *bulbar troubles* are vomiting, dyspnoea, sialorrhoea, perhaps albuminuria.

(c) Death may supervene. It may be rapid—in a few minutes, or slow—in a few days.

Finally, the organism previously asphyxiated is more sensible to a new asphyxia.

It is then possible that many clinical incidents observed during the course of slow asphyxia could be separated from the classic pathogenies, to be united with those whose chief outlines we have studied.—*Le Bulletin Medical*.

A CLINICAL STUDY OF POSTERIOR TRAUMATIC CATARACT.—This is a study of the behavior of the crystalline lens under the influence of injury, direct or indirect. A number of cases are reported, 44 in all, arranged in various groups and concludes that the essential factor in the production of the phenomena under discussion is the swelling of the actual lens fibres, which may be preliminary to further changes. It seems probable that direct injury or concussion of the lens tissues, rather than direct access of the aqueous humor, should be responsible for the production of the posterior opacities; for on the one hand there is good evidence that perforation of the lens capsule is not essential for the production of posterior traumatic cataract, and on the other perforation, although frequently, is not invariably, associated with posterior opacity. The reopening of an old wound in the capsule is, however, very liable to be followed by complete opacification of the lens. The prognosis, both immediate and remote, in a case of traumatic cataract should always be guarded.

In the early stages it is difficult to say whether improvement will occur, or, if it does occur, will be maintained. Mere improvement in vision is not to be regarded as a safe criterion in affording a favorable prognosis, for clearing of central opacities may be associated with progressive changes at the equator of the lens. On this account special attention in examination should always be given to the presence and behavior of changes at the lens periphery, more especially as the mere presence of these is probably a feature of unfavorable import. In every case a lens which has been affected by posterior traumatic cataract is to be regarded as damaged tissue, abnormally susceptible to deleterious influences.—Dr. A. C. Hudson, *Annals of Ophthalmol.*

WILLIAM SPENCER, M. D.

THE PROGNOSIS OF PUERPERAL FEVER BY MEANS OF BLOOD EXAMINATIONS. Kerstein, of Ruge's clinic, has dispassionately examined the actual status of this question. He says we prognose in three ways: firstly, we prognose the disease in general, and are in the habit of saying that in cases having angina the prognosis is favorable, while those having septic peritonitis are often lethal, and this view rests upon frequent experiences. But this general prognosis tells us nothing of the special case. Here we not infrequently encounter great surprises so that our prognoses hold for only a day or for part of a day. Therefore the desire and striving of the physician is for the ideal prognosis, which most likely is unattainable. A sick-

ness consists of two components, namely, malignancy of the disease and resistance of the body. When these two can be accurately gauged, the ideal prognosis is possible.

In puerperal fever much endeavor has been expended in trying to determine the malignancy of the special case. Thus, streptococci, the cause of most cases of puerperal fever, have been studied. Their disproportionately frequent presence in normal cases led to studying varieties of this germ, with the result that those possessing the power of dissolving blood were regarded as pathogenetic. Further study, however, showed that where such existed in the blood, from 10% to 25% of the cases did not die, as all should have done, if this method of examination was to contribute to the ideal prognosis. Hæmolytic streptococci have also been found in the lochia of normal puerpera. Sigwart has therefore, apparently been able to show that hæmolysis does not prove the virulence of the streptococci, however well it may differentiate the varieties of streptococci present. Then the blood has been studied in order to determine systemic resistance. Of the red blood cells it was found that their number is decreased with a reduction of the hæmoglobin content, and microscopically there was present the picture of poikilocytosis, nucleated and polychromatophile erythrocytes, that is the picture of genuine anæmia. Still, cases having less than 1,000,000 erythrocytes and 10% to 15% hæmoglobin have recovered; in fact this has often occurred, as observed at the Heidelberg clinic. This examination, therefore, only shows, what we already knew, that the woman is very sick. The white cells have received much attention. Blumenthal believes that on finding 10,000 leucocytes, with 70% polynuclear neutrophils that pus is present in the pelvis. But this test is no longer tenable since cases have been found having high fever with diminished or increased leucocytes of mild fever with the same leucocyte variation, and the cases sometimes terminated fatally or recovered. The severity of the infection was believed to be indicated by the increase of the polynuclear cells with disappearance of the æsinophiles. But Albrecht has shown that this is unreliable since the worst blood picture may return to normal. The disappearance of æsinophile cells and especially their reappearance was supposed to be of value in the prognosis, but this is not of use since they often only reappear after the improvement of the patient begins. The polynuclear cells have also been classified according to the number of nuclei, but this study, together with other methods of blood examination has proven unreliable. The probable causes for the failure of the blood examination are fully discussed, but cannot be adequately reviewed here. The author, however, says that although the blood examination is so valuable for diagnosis it has contributed very little to prognosis. In fact he thinks it unlikely that we can ever measure the resisting powers of the body, such as is requisite for making an ideal prognosis. Physicians will probably never become prophets.—*Arch. f. Gyn.* Vol. 89, 337.

THEODORE J. GRAMM, M. D.

THE INDICATIONS FOR CURETTEMENT.—In a brief and practical paper Olshausen enumerates the indications for curettement to be (1) incomplete abortion in the second month of pregnancy; (2) proliferating endometritis inducing hemorrhage; (3) for diagnostic purposes. He calls atten-

tion to one condition from which even before curettement it is sometimes possible to determine that a benign process of the mucous membrane exists, namely a remarkable succulence of the mucosa at the external os. He has never found such a condition present in carcinoma of the uterus. A fourth indication consists in diseases of the mucous membrane which are associated with the formation of abnormal membranes or induce habitual abortion. The ætiology of exfoliative endometritis is not yet clear, but we may regard it as probably proceeding from ovarian irritation. In these cases dilatation and curettement palliate, relieving also at least for some months the pain attending the discharge of the membrane. So also may cases of habitual abortion be relieved where a suspicion of endometrial changes exist.

On the other hand, Olshausen emphasizes the futility of attempting to relieve catarrhal conditions by curettement. Even the curette acting as a knife is not the proper means of treating catarrhal conditions about the cervix. Within the uterus catarrhal processes usually occur as chronic conditions associated with hyperplasia induced mostly by myomata and are associated with hemorrhage. These belong under the second indication above named. Catarrhal conditions of the cervix are best treated by astringents or by the use of the actual cautery. Curettement for other inflammations of the corpus cavity is entirely contraindicated.

In the discussion of the paper Baaer called attention to curettement in certain cases of sterility, where in association with dilatation it is sometimes beneficial.—*Zeitsch. f. G. u. G.* Vol. 65, 712.

THEODORE J. GRAMM, M. D.

GANGRENE FOLLOWING INFUSION OF SALT SOLUTION.—Kauffmann reports an instance of this unfortunate occurrence in a patient collapsed after labor, in whom 400 and 600 c.c. of salt solution was injected subcutaneously on the upper chest walls by means of an irrigator. Even before leaving the patient a mottled condition of the injected area attracted attention, and within eleven hours diffuse gangrene was present, involving the subcutaneous fat. After a protracted illness complicated also by thrombo-phlebitis and pneumonia the patient recovered. Such a vast amount of good has so often followed this treatment that its occasional dangers have not been accentuated. In this instance the amount of injected fluid was not excessive, the rapidity of infusion was not great, the force used was only that obtainable by an irrigator instead of a syringe, the temperature of the fluid was rather too low than too hot, sepsis could be positively excluded, analysis of the salt used showed no admixture of soda. The patient did not have glycosuria. The fluid was not injected into the skin, where ergot sometimes causes gangrene when not injected deeply. The literature recording such accidents is not abundant, and yet Kummel has observed a case of gangrene of the hand following salt solution infusion into the radial artery. Baisch saw six cases of gangrene after injecting Tavel solution, consisting of 0.75 per cent. salt solution with the addition of 0.25 per cent. soda. Osterman reported a case injected in the intraclavicular region and in the thigh, where the gangrene affected only the latter region.—*Zeitschr. f. G. u. G.* Vol. 65, p. 729.

THEODORE J. GRAMM, M. D.

MINERS' NYSTAGMUS.—In all colliery centers miners' nystagmus is a very common disease. The symptoms are very characteristic. The eyes oscillate violently, the lids twitch, and the man appears to be, and often is, in a state of great nervous tension. Visual acuity is generally as low as 1-10. Reading is impossible and usually the man is compelled to give up work. The history is usually that the man has worked for some years in the pit and has in most cases been a "holer," one who lives on his side and undercuts the seam of coal. He first notices that at the end of a day's work the lights begin to "dance," and this grows worse until the dancing is constant. Hemeralopia may be present. The etiology is obscure, but has probably been wrongly stated in the text books. It has been supposed to be due to cramp of the muscles when looking upwards, but the miner does not strain his eye upward, he makes himself comfortable and moves his head and not his eyes.

There is no proof that any muscle fatigue exists and conclusive proof that it does not. If muscular fatigue did exist, it would produce a tetanic and not a clonic spasm. Nystagmus is essentially a disease of the collierie and is not found in metal mines. The only theory which can explain the disease is that suggested by Reid, of Nottingham, and Nuel, of Belgium, that it is a disordered cerebation, a defect of the brain, not of the eye muscles, produced by the peculiar work—long continued rhythmic movements of the pick in comparative darkness. The miner must leave his work and must never return to it. Many cases recover completely, but some never entirely lose their symptoms.—Dr. T. Harrison Butler, *Annals of Ophthalmol.*

WILLIAM SPENCER, M. D.

EARLY GETTING UP AMONG PUERPERAL WOMEN.—Mullerheim (*Ber. klin. Woch.*) discusses the various experiences of authors who advocate the practice of letting women sit up sooner after labor, instead of lying in bed for nine days, and the gymnastic methods allowed while they lie in bed. Some authors allowed the women to get up a few hours after labor to pass urine and to sit up a few hours each day, leaving the hospital at the end of the week. Others permit gymnastic exercises, with movements of the legs and the abdominal muscles. The author was decidedly opposed to these measures at first. He now believes that these gymnastic exercises have considerable value. The author believes that he has found a middle course by having constructed a bed which is capable of changing its shape so that the patient may be raised to a sitting posture without leaving the bed. The author thinks that however well the early rising of the patient may result in the hospital, where the patient is under careful supervision, it is doubtful whether it will not be harmful when applied in the home among working women, with whom to get out of bed is to go to work. It is doubtful whether weakness of the abdominal muscles, prolapsus, and ptosis of abdominal organs will not ensue after the patient has left the hospital, the eighth or ninth day after labor being too soon to decide on the matter. As to the occurrence of embolism, some authors believe that early rising is a prophylactic against it. Some interesting observations have been made in Java. Here the woman is not allowed to go to bed after labor, and among these women embolism is frequent, as well as prolapsus, anemia and neurasthenia. Mechanical thrombosis, occurring

without fever, in cases of heart and circulatory disturbances, occurs generally in the pelvis and legs. It results from slowing of the circulation, and here muscular movement and increase of circulation are of value. In septic thrombosis movement and exercise have serious results. Early rising should be carried out in carefully selected cases only. It entails danger of late infection through the vaginal discharge, and increases the amount of prolapsus of the abdominal and pelvic organs among working women.

CANCER OF THE BODY OF THE UTERUS.—In an article on this subject, Ballard concludes that it is all-important for us to consider a profuse leucorrhœa or hemorrhage after menopause as serious. We should not be satisfied to allow nature to take its course when these symptoms persist, even if a curettage does not show malignancy. Metastasis is less frequent in carcinoma of the corpus uteri than in cancer of the cervix, hence the former is more amenable to treatment. On every diagnosis made, a complete hysterectomy done, a favorable prognosis can be given.—*Amer. Jr. Obs.* Vol. 61, p. 466.

THEODORE J. GRAMM, M. D.

CHLOROFORM IN ECLAMPSIA.—Ward, in writing about the experience at the Sloan Maternity Hospital, believes that chloroform is harmful in the treatment of eclampsia. The disease causes changes affecting mainly the liver and kidneys. In the liver these changes vary, and no two pathologists seem to agree exactly as to the finer details of the histology; but on the whole, disregarding these fine points, the liver changes consist in hemorrhages, cloudy swelling, central necrosis or general autolysis of the liver cells. It is known that changes quite similar are produced by chloroform. Repeated administration of chloroform to dogs has clearly demonstrated this fact. The author reviews the reasons usually assigned for controlling the convulsions, and chloroform is often the means employed. He questions the advisability of this practice, since, as he says, the convulsions are but an outward symptom of the severity of the toxic process, an indication of the overwhelming of the cerebral cortex by the toxins, and simply controlling the convulsions with an agent like chloroform has no effect upon the underlying cause or upon the course of the disease. For these reasons chloroform is no longer used in any case of toxæmia of pregnancy, ether being substituted where an anæsthetic is required. The results obtained seem to favor the views expressed.—*Amer. Jr. Obs.* Vol. 61, page 437.

THEODORE J. GRAMM, M. D.

OPERATIVE TECHNIC IN ITS RELATION TO SHOCK.—Rakestraw (Savannah, Ga.) in an article on this subject, whose title accurately indicates its contents, says it is not always obvious whether a bad condition is due to the results of hemorrhage or of shock, and yet giving attention to the quantity of blood taken up by mops, &c., and to that removed by the irrigating fluids ought to give a fair idea of the blood. Crile has shown that shock is due to an exhaustion of the nerve centers governing blood pressure by too frequent and too powerful stimuli. Rogers says shock is characterized by arrest or rather a diminution of nutritional activity occurring

through reflex action under the influence of sudden violent excitation. Philippen has established the fact that during shock a veritable auto-intoxication is produced as the result of disorders occurring in cellular nutrition. The toxic substances cannot pass from the cells, nor can they pass from the blood into the cells. This explains why during shock the patient is less susceptible to the action of certain drugs like strychnia and morphia. In speaking of prevention the author mentions a number of details. Thus he says scrubbing the skin with a bristle brush is a needless source of irritation when used just before operating. He also condemns the use of large quantities of volatile substances like alcohol and ether which induce cold and irritate the skin. Much wetting of the covering of the patient is also discountenanced. Unnecessary handling of abdominal organs is, of course, condemned; and of the gentle touch, the author says, this is the true surgical science, it is scientific culture and refinement, it is the very soul of an experienced intellect. The summary of the paper is too long for reproduction here, but selecting a few items; placing a patient on a veranda in the open air facilitates his recovery from the anæsthetic and prevents the prolongation of the nausea from the odor and reinhalation of the anæsthetic; stimulation should always be supplemented by nutrition, for without the latter the organism is disappointed and a serious reaction is likely to be reproduced; strychnia is not indicated in shock because it adds to the condition by stimulating the already excessively irritated nerve centers; the practice of giving drugs regularly at intervals irrespective of indications is harmful. In shock no treatment should be given unless indicated at the moment of its administration.—*Amer. Jr. Obs.* Vol. 61, 403.

THEODORE J. GRAMM, M. D.

THE NON-OPERATIVE TREATMENT OF HEMORRHOIDS.—According to Dr. L. H. Schwartz (*Therapeutic Medicine*, January, 1910), the non-operative treatment of hemorrhoids consists in:

1. Removing the cause when possible.
2. Avoiding the use of cushioned seats.
3. Overcoming constipation by
 - a. Forming the habit of going to stool regularly.
 - b. Suitable diet.
 - c. Massage.
 - d. Occasional tonic laxatives.
4. Spinal and rectal douching.
5. Faradic and high frequency currents.
6. Attention to general hygiene.

For acute attacks:

1. Rest in bed.
2. Move the bowels with a warm soapsuds enema.
3. Apply iced cloths saturated with witchhazel and tincture of iron.
4. Rectal douches of cold water every few hours in bed.

FISSURA ANI.—Its Diagnosis and Treatment. In a very practical article, Dr. J. F. Saphir (*Post-Graduate Med. Journ.*) reviews this subject.

Fissura ani, or painful ulcer, is a superficial tear in the mucous membrane lining the anus, which is checked at the muco-cutaneous junction,

and is always characterized by an acute pain transferred to all parts in the vicinity of the anus, due to spasmodic contractions of the sphincter muscle.

Fissure can be found in the young and the old, but is more common in women than in men, because women are the more common sufferers of constipation and because the skin is of finer texture. It occurs more frequently in the poor than in the rich, and may be single or multiple, although generally single. When of venereal origin, there may be two or three. Fissures may be large or small and superficial, involving only the mucous membrane, or deep and reaching to the fibres of the sphincter muscle.

Fissures always run parallel to the long axis of the bowel, and in 90% to 95% of all cases the fissure is located in the posterior anal commissure, occasionally at the anterior commissure and very rarely at the sides of the anus.

The most common cause of fissura ani is constipation, followed by a passage of hardened feces over the delicate mucous membrane which may cause a laceration to be stopped only at the muco-cutaneous junction, on account of the toughness or thickness of the skin at the anal margin.

FISSURE MAY ALSO BE CAUSED BY:

1. Atrophic proctitis.
2. Congenital narrowness of the anus.
3. Diseases causing prolonged straining at stool, as diarrhea or dysentery.
4. Foreign bodies passed from above or per rectum.
5. Syphilitic, tubercular, venereal or malignant ulceration of the rectum or colon.
6. Rectal masturbation, pederasty.
7. Improper instrumental examination.
8. Careless introduction of syringe nozzle while giving an enema.
9. Injury due to child-birth.
10. Prurigo, eczema, or other skin diseases involving the anal region.
11. Hemorrhoids may accompany or cause fissure.

The usual formation of fissure is as follows:

During a hard passage of feces after constipation accompanied with severe straining at stool, some projection of the fecal mass is caught or forced into one of the semilunar valves, tearing its lateral attachments, and the tear or rent in the mucous membrane is extended at each succeeding stool until the skin is reached and the further advance of the tear is checked only at the muco-cutaneous junction, due to the toughness of the skin.

Nature makes an attempt to heal this fissure when the sphincter muscle is at rest, but at each succeeding stool the sphincter muscle, on stretching, tears open the wound and nature's attempts at healing are destroyed. This causes a smarting, burning pain at the stool, a feeling of heat about the anus, occasional bleeding after stool, and severe excruciating pain following stool, due to spasmodic contractions of the sphincter muscle catching the ulcer in its grasp and resulting in severe pain (likened by the patient to a "toothache") lasting anywhere from two to twelve hours after stool and sometimes this pain is continuous.

The patient usually gives a history of constipation, severe straining at stool, one or two drops of blood noted after stool, pain starting almost immediately after stool, and lasting for four or five hours, this pain being situated within the anus, and radiating from this point down the thigh and upward to the sacro-iliac joint, then suddenly disappearing only to return after the next defecation.

Severe pain lasting for from two to six hours after stool is one of the characteristic and diagnostic signs of fissura ani. This pain after stool is so intense and the suffering so severe at times that the patient is actually afraid to have a passage on account of the fearful pain he anticipates. This constant pain and irritation as well as the irregular action of the bowels and the taking of insufficient food cause the patient to become emaciated and debilitated and to acquire a pale, anxious, and careworn look.

Fissures of the anus very rarely heal spontaneously, because when nature makes an attempt to heal the fissure it is so frequently torn open at every passage, and is exposed to infection from the small particles of feces coming down from above, especially if there are loose movements, because patients with fissure take many cathartics to soften the stool or make it fluid so as to relieve the pain which, as a rule, follows defecation. These particles of feces become lodged in the wound and the great supply of nerves in this region causes tonic paroxysmal sphincteric contractions which are very painful, but typical of fissure. The edges of the fissure swell, become edematous and the edges either widely separate, making a distinct cleft, or overlap, and there is a discharge of pus or mucus, causing excoriation, discharge and pruritis.

Fissura ani causes more pain and suffering than any other rectal trouble and therefore the profound gratitude of the patient when relieved.

Treatment.—Very rarely the non-operative treatment is efficient. Some fissures when not very deep heal spontaneously if kept clean and are not irritated. In that small percentage of cases that are healed without operative interference, the following treatment has given the best results:

Keep the ulcer or fissure clean. Apply a 2% or 4% solution of B. eucaine or use the ethyl chloride spray to anesthetize the parts, and then use local applications of a 5 or 10% up to 25% silver nitrate solution for a first application, followed by a 10% solution of silver nitrate, every day or every other day.

Ichthyol in glycerin (10%), balsam of Peru and argyrol 25% as local applications have been used with fairly good results.

Ointments and soothing lotions and powders and rectal suppositories have been used, but all with very little success. Powders should never be used, on account of the tendency of powder to cake, and then act as a foreign body and a fistula or abscess may result and give additional suffering.

The Paquelin cautery has been tried and has been found successful in some cases, after first applying a solution of B. eucaine or cocaine, and being very careful not to burn the skin, because a very painful ulcer follows a burn of the skin with the Paquelin cautery, and one which is also very difficult to heal.

Surgical treatment is the best and quickest cure for fissura ani, and gives the most gratifying results.

(1) Divulsion of the sphincter muscle is very painful and is to be used only under general anesthesia, or where the patient objects to taking a general anesthetic, use local anesthesia by the injection of cocaine or B. eucaïne into the sphincter muscle and the surrounding parts after first anesthetizing the wound. This diminishes but does not prevent pain during divulsion. Divulsion can be gradual by a dilator or preferably by the fingers well lubricated with oil or soap. Forcible divulsion under a general anesthetic is preferred, but great care must be taken not to tear the fibres of the sphincter muscle. Three to five minutes should be taken in divulsing the sphincter, and pressure must be brought to bear in all directions. Under general anesthesia, divulsion with instruments should never be used, because one cannot gauge or control the amount of pressure used as well as when divulsion is made by the well lubricated and sensitive fingers.

Relaxation of the sphincter muscle by divulsion, whether under general or local anesthesia, instrumental or by hand, relieves the spasm of the muscle, prevents contraction, rest is obtained, and the wound is given a chance to heal; then local applications of 4% to 10% silver nitrate solution, every day or every other day, is preferred.

(2) Cutting of the sphincter muscle:

a. Under general anesthesia.

b. Under local anesthesia.

Division of the sphincter muscle under general anesthesia is the best method, but it can be done with excellent results under local anesthesia, as advocated by Dr. S. G. Gant, by the use of cocaine or B. eucaïne solution, never stronger than 1-8% or 1-10%, or even by the injection of sterile water, which produces local anesthesia due to the pressure on the local nerve endings, lasting for from three to five minutes and for a sufficient length of time to cut the sphincter muscle, and to relieve the patient of this most agonizing pain and suffering.

In division of the sphincter muscle complete and not partial division gives the best results. The fear of incontinence following division of the sphincter muscle is exaggerated very much. I have never seen a case of incontinence following proper division of the sphincter muscle.

Always use a sharp bistoury and cut down through the fissure and through the sphincter muscle, always at right angles with the transverse muscular fibres of the sphincter muscle. Always remove the sentinel pile when present and make the incision extend about $\frac{1}{2}$ inch beyond the anal margin so as to get proper drainage when dressing the wound.

The wound must be allowed to heal from below by placing a strip of narrow gauze to the bottom of the wound, and the patient should receive daily topical applications of 4% silver nitrate solution or balsam of Peru or ichthyol in glycerine 10%.

The patient should have a daily semi-solid stool.

I shall attempt to give a more thorough review of the treatment of this most important rectal trouble in another paper.

The most salient points in diagnosing and treating fissura ani, are as follows:

DIAGNOSIS OF FISSURE.

1. Burning pain after a hard stool or constipation.

2. Followed by severe excruciating pain lasting 3 to 6 hours after stool.
3. One or two drops of blood after stool.
4. Presence of sentinel pile.
5. Dread of having a movement for fear of pain.

TREATMENT.

1. Local applications.
2. Paquelin cautery.
3. Division of the sphincter muscle under general or local anesthesia.
4. Division of the sphincter muscle under general or local anesthesia.

STERILIZATION OF THE SKIN BY THE USE OF AN ALCOHOLIC SOLUTION OF IODINE.—Waterhouse and Fenwick, in the *Lancet* of April 16, 1910, state that for several years they have employed iodine as an antiseptic for the sterilization of catgut, and have found that soaking the catgut, as it comes direct from the manufacturer, in a solution of 1 part of iodine to 500 of equal parts of rectified spirit and water for a period of one week has invariably proved sufficient to render the catgut sterile, and thus safe for surgical purposes.

They have on several occasions in years past attempted to make use of the tincture of iodine as an adjuvant to the sterilization of the skin after a preliminary careful and thorough washing and scrubbing with soap and water, and the employment of an antiseptic solution. To their disappointment the results were not superior to those obtained by the ordinary methods, and they had begun to fear that for some reason iodine in solution was unsuitable for sterilization of the skin. It was not until their attention was drawn to the fact that this method failed for the reason that the water used in cleansing the skin caused the epithelial cells to swell, and thus prevented the antiseptic from penetrating deeply between them and into the ducts of the sebaceous and sweat glands, that they realized that the preliminary washing with soap and water was not only unnecessary but even harmful.

Since abandoning the use of soap and water and contenting themselves with painting the skin with an alcoholic solution of iodine their results have been nearer perfection as regards the absence of sepsis than any they have previously obtained. They have made use of the method in 150 cases, with the result that 149 healed entirely by first intention. In one case only was there any sepsis, and even in this instance (a radical cure of inguinal hernia) when the sutures were removed on the eighth day the wound was healed except in its outer three-quarters of an inch, where its margins gaped slightly. At the next dressing three days later a small quantity of pus was found, which on bacteriological examination gave a pure culture of staphylococcus albus. This slight suppuration soon ceased, and the patient was discharged at the end of three weeks with the incision soundly healed.

For the first 26 cases a solution of in some cases 8 and in others 6 per cent. of iodine in rectified spirit was employed. It was painted on the skin of the operation area two hours prior to bringing the patient into the theatre. As soon as the skin had dried it was covered by a sterilized towel, which was bandaged on. While the anesthetic was being administered a second application of the 8 or 6 per cent. solution was made, and the operation was commenced two or three minutes later. It soon be-

came apparent that these solutions were unnecessarily strong. Three patients complained that the smarting pain was severe after the first application. In all three the skin of the neck was the area involved. The solution was very destructive to the towels, burning holes in them. They therefore determined to employ a weaker solution, and decided upon 2 per cent. of iodine in rectified spirit. This has proved entirely satisfactory and has given rise to no single complaint of smarting. For the first 25 cases in which the weaker solution was used they thought it well to employ three applications of the iodine paint in place of two of the stronger fluid. The first application was made two hours, the second one hour, prior to operation, and the third on the operating table.

Recently the authors omitted the intermediate painting. The 2 per cent. solution appears to be just as trustworthy as the 6 per cent., and it has not caused any complaint of smarting or destruction of towels in the operating theatre.

It is worthy of note that the staining caused by the iodine solution is at once removed by soaking the towel in a solution of carbolic acid (2½ per cent.).

A matter of real importance is that the iodine should be dissolved in rectified, not in methylated spirit. This the authors learned at the expense of considerable suffering to the assistants as well as to the operator. When first they employed the 2 per cent. solution it was ordered to be dissolved in rectified spirit. Some one, well aware that it was used for external application only, in the interests of economy employed methylated spirit without informing them of the change. To their astonishment the weaker solution proved painfully irritating to the conjunctiva, even some minutes after its application. The suffering and lacrimation were so intense that they contemplated abandoning the method when they learned of the substitution of methylated for rectified spirit, and insisted on the employment of the latter, since which the trouble has entirely disappeared.

On a few occasions tincture of iodine was employed. This, as also a 2 per cent. solution of iodine in chloroform, gave results quite similar to the 2 per cent. alcoholic solution.

In future the authors assert they will always employ a 2 per cent. solution of iodine in rectified spirit, and paint this solution on the skin two hours prior to the operation, the preliminary shaving and any necessary washing of the skin being performed some time earlier in order to allow the skin to dry. They will then for greater security in important cases repeat the painting one hour later, though they hardly deem this intermediate application necessary. The last painting will be done on the operating table. A small flat painter's brush answers admirably. It need only be sterilized if the surgeon is to handle it on the operating table. In general, a dresser or a nurse will do the painting while the surgeon is washing his hands.

In radical operations for hernia in small boys it is always difficult to keep the penis under cover, and in such cases the authors invariably paint the whole organ and scrotum with the 2 per cent. iodine solution and leave them uncovered with a full sense of security.

It must be admitted that the iodine solution increases the vascularity of the skin and subcutaneous tissues, and that the superficial hemorrhage is greater than normal. Further, it seems certain that the edge of the knife

becomes dull sooner than is generally the case, and the skin appears distinctly hardened. In young children collodion applied to the incision after suture is apt to cause redness of the skin and irritation.

The house surgeons, who have used this method in a large number of cases in the out-patient and casualty departments, are in general agreement that whilst the results obtained by them have been very satisfactory they have not been equal to those found in the case of in-patients. The reason doubtless is that in the hurry of out-patient minor operations a sufficient time may not intervene between the two applications of the iodine solution; thus it may be reduced from two hours to ten or fifteen minutes.

In certain cases in which it appeared probable that the skin incision might be infected by discharge from a hollow viscus—e. g., colotomy and cholecystostomy—it was found advisable to paint the line of incision with the 2 per cent. iodine solution each time the wound was dressed. The incision was covered with dry cyanide of mercury gauze. Though this frequent painting might be carried out twice daily for from four to six days no interference with the healing of the incision was noted. This method the writers cordially recommend.

A notable advantage of the iodine method is the fact that the whole preparation is carried out only two hours prior to the operation. One of their private nurses informs them that in her experience a patient prepared for an amputation of the breast the evening prior to operation hardly obtains any sleep. The scrubbing of the skin, the employment of the necessarily irritating antiseptic, and the bandaging are jointly responsible for this, and the dressing is a constant reminder of what is to come in the morning. With the iodine method the patient's preparation only begins in the morning, and she therefore has nothing but the dread of the operation to interfere with sleep.

In conclusion, the authors add that they are so satisfied with the iodine method that they intend to use it in future as a routine measure, and will continue to do so until a better is discovered.—*Therapeutic Gazette*.

THE VALUE OF SERUMS AND VACCINES IN THE TREATMENT OF DISEASES. —Raw, in *The British Medical Journal*, deals with this question with reference to acquired immunity and then takes up in turn the anti-streptococcic sera as used in puerperal septicemia, erysipelas, malignant endocarditis, acute tonsillitis, diphtheria, tetanus, tuberculosis, and then speaks of the use of vaccines from human sources for tuberculosis, pneumonia, staphylococcic infections, Coley's fluid and typhoid fever. The writer believes that the vaccine treatment of the latter disease, in which Wright was a pioneer, is more a prophylactic than a curative measure. The best results are obtained in staphylococcic infections. The writer believes that vaccines do good in pneumonia, but the evidence is still small. In regard to tuberculin from human sources the author has used the T. R. in 110 cases, including tuberculous glands in the neck, tuberculous peritonitis, tuberculous joints and sinuses, lupus, tuberculous meningitis, and genito-urinary tuberculosis. In the localized forms of the disease, most of which he believes to be of bovine origin and conveyed to children in infected milk, he is convinced that the T. R. has an excellent effect except in those patients in whom there is some pus encysted in the body, whether

in the interior of the joint or in a bone under pressure, or as an abscess in a lymphatic gland. In these cases there is a danger of tuberculin causing dissemination of the bacilli, with a resultant blood stream infection. It is a good rule never to give tuberculin if any pus is localized in the body. In many cases a course of tuberculin has had the effect of greatly reducing enlarged tuberculous glands of the neck, by dispersing the periaidenoid tissue and causing a general freeing and loosening of the glands themselves, while in some the enlarged glands have entirely disappeared. If, however, there is any tendency to suppuration the glands must be opened, and in all cases the pus should be liberated. The author is convinced that the extensive dissection of glands in the neck is wrong in principle, and sometimes leads to a general tuberculosis which is fatal. In tuberculous peritonitis tuberculin has a splendid effect, and, combined with operation and drainage, many patients have been completely cured. In genito-urinary tuberculosis ten or twelve injections of tuberculin have often had an excellent healing effect when everything else has failed.

LOCAL ANESTHESIA.—For Use Upon Mucous Membranes. Cocaine is no doubt the quickest and most certain of any drug in its action. That it causes contraction of the blood vessels is in itself an advantage for examination in certain situations and for the treatment of certain conditions. If carefully used in small amounts the danger in its use is not great. Since the amount absorbed can never be definitely determined, it is well to heed the admonition of Wood never to exceed three-quarters of a grain by injection. We have placed the limit at one grain and have never experienced unhappy results after many years of constant use. Though the dangers in the use of cocaine are very slight when used with the precautions above indicated, let it be repeated that they are never absent. For use in small operations about the mouth and face we still employ cocaine. For extensive operations in these regions quinine has the preference.

With the other drugs employed in local anesthesia the writers have not had an extended experience. There is a general agreement that they are less dangerous than cocaine and also that they are less efficient. In efficiency and safety as well as in cheapness they are far surpassed by quinine and urea hydrochloride.

Freezing.—Aside from the extreme limit of usefulness of freezing as a means of producing insensibility to pain, is the fact that when the tissues thaw out severe pain results, this quite independent of any pain which may be attendant upon the operation itself. The method has a certain use, however, but it is limited to the skin for small areas and for operations of short duration.

Methods. Refrigeration sufficient to make the skin insensible may be secured by means of ice and salt. The salt is pressed against the skin with a piece of ice the size of a walnut. After a few minutes the skin becomes insensible. This method has been used for simple punctures, as in thoracic paracentesis, in the absence of more suitable materials. For timid patients it has the advantage, as have all methods of freezing, that the anesthesia can be produced without initial pain. The fact that the patients suffer more from the thawing than from the operation itself is not a contraindication sufficient to prevent its use in such persons.

Volatile substances are usually used when it is desired to produce local anesthesia by the abstraction of heat. Ether spray used after the method of a freezing microtome may be employed. Ethyl chloride has been most used, however, and is preferable. This is placed upon the market in small containers fitted with a cap or valve which prevents evaporation when not in use. These containers are of such size and form as to fit the hand, the warmth of which, when the receptacle is grasped, hastens the evaporation of the chemical and thus the refrigeration. By means of this apparatus a small area of skin may be frozen in a few seconds. The proper degree of refrigeration has been reached when the skin becomes frosty. Freezing beyond this stage does not increase the anesthesia and may lead to sloughing. The instruments needed for accomplishing the desired therapeutic purpose should be previously arranged so that the necessary operation may be carried out without loss of time, since the duration of the anesthesia is very brief. The legitimate field for this mode of anesthesia is limited almost entirely to the opening of small abscesses or to the anesthetization of the skin preliminary to the making of a puncture of the needle for local anesthesia as recommended by Schleich. Here it serves a very useful purpose, since the initial pain of infiltration anesthesia is avoided. It may be employed as a preliminary to infiltration anesthesia or, conversely, infiltration anesthesia may be used to prevent the pain caused by the thawing out of the tissues after freezing. By the combination of these two methods it is possible to carry out painlessly, procedures otherwise very painful. Freezing should not be employed preliminary to incision where primary union is desired, since the freezing of the tissue so disturbs the vitality that primary union is likely to be interfered with.—Arthur E. Hertzler, M. D., *Amer. Jour. of Surgery*.

THE TREATMENT OF CONVULSIONS.—Chapin gives the following advice as to the treatment of convulsions:

Convulsions in infancy or early childhood, whatever their causes, have the same mechanism and hence call for a fairly uniform treatment. While a convulsion is rarely fatal, it must be confessed that the sight of one is an alarming experience for the average layman, and the physician of knowledge and experience cannot but look upon such an attack with foreboding, as he not infrequently sees an ensuing damage of the brain that, although apparently slight, may have far-reaching effects. Whatever the causes, whether a reflex irritation from the gastrointestinal tract or other region of the body, or from one of the many toxemias, the immediate indication is to bring the child out of the attack as quickly as possible. As the emergency requires prompt handling, it is well to have in mind some regular order that may be speedily carried out; when the attack is over an inquiry as to the cause must be carefully made in order to learn its significance, and, if possible, to prevent similar seizures in the future. The author's treatment is as follows:

The child is placed upon a table or upon some one's lap in such a manner that a number of measures can be simultaneously carried out. Some cracked ice is called for, placed in a handkerchief or other thin material, and spread over the occiput and vertex in such a manner as rapidly to cool the brain. If ice is not available, cold compresses wrung out of water at the lowest temperature that can be procured may be employed. The feet

and legs are at the same time plunged in a pail containing hot water to which one or two tablespoonfuls of mustard has been added. Caution must here be exercised, as in the confusion the water may be too hot. The author is now treating a case of extensive burns as a result of a hot bath given before entrance. To make sure, always place the hand in water brought for this purpose before using it for a partial or complete bath. It has seemed to the writer that practically the same results can be procured by this partial bath as by complete submersion, and a simultaneous use of other measures is thus made possible.

The bowel is at once washed out, using any available syringe, although the fountain apparatus is preferable. The ordinary rectal tip is used, as there is no special need of trying to pass a tube for this purpose. If the buttocks are elevated, the bag being held about two feet above the level of the body, and the water allowed to flow in slowly, the lower bowel can be emptied by means nearly always quickly available. In a large number of cases this is followed by the expulsion of undigested masses, and the convulsion ceases. But even if the cause is elsewhere and more deep seated, the washing and emptying of the bowel do good by way of revulsion, and the cleansed passage is in the best condition for absorbing any remedies that may be injected.

THE TREATMENT OF OBESITY.—Prof. E. Heinrich Kisch, of Marienbad, in a very exhaustive article states that the method of treatment must be left to the individual judgment of the physician as to whether the case is one of alimentary or constitutional lipomatosis. In alimentary obesity the most important and unavoidable point is systematic undernutrition, reduction of the nutriment to a smaller quantity than that to which the patient has been accustomed, always taking due care, however, that the organism will be supplied with the necessary amount of proteids. In this connection I wish to emphasize particularly that the food limit for obese patients, at which the metabolic condition of the body will be maintained, is considerably smaller than is normally required for persons doing a moderate amount of work, always provided that the condition of the patient is otherwise satisfactory and the cardiac function is only slightly impaired. Voit's axiom that the fatter the organism the smaller the quantities of proteids required to effect a balance of powers, has been amply confirmed in my experience. An obese man weighing 90 kilos need not live up to the dictum that an adult doing a moderate amount of work generally requires 40 calories per kilo body weight per day. He will not require 90x40 or 3,600 calories in his daily food; for him an undernutrition yielding about 2,500 calories will be quite sufficient, and this value can for a short time be reduced to one-half or less while undergoing an obesity cure.

Going further into dietary details, the food should consist principally, but not exclusively, of meat, the lean parts of which are preferable. Pork, which is very rich in fat—except lean ham—goose, duck, and fat smoked beef, should be avoided as much as possible; fish may be partaken of, if only for the reason that it brings some change into the bill of fare, but it should not be forgotten that the protein content of fish is much less than that of mammals and fowl. Fishes which are very rich in fat, such as salmon, bloaters, sprats, herrings, should be forbidden. Eggs are allow-

ed in moderate quantities, bread only sufficient to keep within the limits above stated for the permissible quantity of carbohydrates. Toasted bread or zweiback is preferable to fresh bread. Cake and farinaceous food are positively barred from the table on account of the large amount of fat and carbohydrates they contain.

As to vegetables: potatoes, turnips, carrots, beans and peas are not allowed on account of their carbohydrates; turnips, cabbage, spinach, salads and asparagus are allowed. The vegetables should not be cooked with butter, fat or oil. Fresh fruit is permissible; dried fruits, sweet compote and fruit ice are forbidden. All kinds of cheese contain considerable fat and are not recommended. Condiments may be added in very small quantities in order not to unduly incite appetite. As to liquids: fat soups, cream chocolate and cocoa should be avoided; brandy, liquors, and sweet champagne are forbidden.

Hand in hand with the dietary changes which are to effect an increased fat metabolism, must go bodily exercises which will effectively attack the fat stores of the organism. Here should be considered the patient's general state of nutrition, his former habits of rest or movement, and particularly the condition of his heart, in order to determine the proper measure of exercise in each individual case, which should, however, always be kept below the functional capacity of the heart. In order to avoid dyspnea, the performance of exercise should only gradually be increased, and be interrupted by restful pauses. With this restriction, patients with alimentary adiposity may indulge in rowing, swimming, horseback riding, skating, lawn tennis. Bicycling is permitted only to young people, and then only in moderation.

As any obesity cure lays claim to promoting the resistant power of the organism and particularly of the cardiac capacity, it is necessary to record the bodyweight at least once daily, to carefully control the muscular power with a dynamometer and to register the blood pressure by a sphygmograph; the urinary analysis should also be considered.

For patients with alimentary obesity the use of watering and bathing cures, continued for several weeks, are excellent. Both experience and experiments have demonstrated the fact that the sulphate of soda waters of Marienbad, Karlsbad and Tarasp are particularly able to exert a good effect upon fat consumption by increasing the metabolism and inducing an increased excretion of oxygen. But even disregarding this assumption, it is certain that the abundant excretion of urine and of massy or fluid stools, which these waters promote, serve to reduce the nutritive value of food and thereby to prevent an undue accumulation of fat. And not only does the evacuant property of these alkaline saline springs prevent its accumulation, but it also favors in a high degree its increased decomposition.

DIABETES IN CHILDREN.—P. Maurel (*Gazette des Hopitaux*, 1910, page 696) observes that diabetes is still considered very rare in childhood. The author has seen several cases, however, and believes that the reason for its rarity lies partly in the fact that the diagnosis is but rarely made in young children. So far as the diagnosis and symptoms are concerned, they are the same as in adults, but present certain special features. Thus, polyuria is one of the first signs and one of the most frequent symptoms.

There is often pollakiuria, and occasionally incontinence. The patients suffer from marked thirst, and this, with the polyuria, should lead us to suspect diabetes. The glycosuria is proportionately greater than in adults. Albuminuria is not so frequently found as in adults. The presence of acetone varies, and may be noted without any signs of acid intoxication.

In infants the onset of diabetes is frequently mistaken for some other condition. The mother attributes the child's illness to dentition or to digestive troubles. The child continues to lose weight, and it is only after every other cause has been thought of, that we are face to face with diabetes. Of all the symptoms, emaciation, thirst, and polyuria are the three which are most striking. The course of the disease is rapidly fatal. The child literally melts away, and gradually becomes a living skeleton. Death may follow a short, acute complication, such as pneumonia, an attack of acid intoxication, or a condition resembling marasmus. Occasionally a temporary improvement may be noted, but the course of the disease continues. The point is, that in very young children diabetes is more or less acute and rapid. In children somewhat older, the disease may last six months or longer.

Recovery is exceptional, but treatment at an early stage has a great deal of influence, favoring the chances for prolonging life or possible recovery. Usually the disease goes on swiftly toward death, in coma, or in the course of pulmonary complications. Coma is less frequent than in adults, and yet is quite often noted.

Some of the German authors describe two types of diabetes in children, the light form, which is susceptible of amelioration by proper diet within a week or two, and the severe form, already described.

The diagnosis lies, of course, in the examination of the urine plus the clinical symptoms mentioned. The treatment is chiefly dietetic and hygienic. The point consists in reducing to the minimum those foods which may contain glucose, and also to avoid those articles which may favor the combustion of glucose in the body. In nurslings, breast feeding may be continued, but after each nursing a tablespoonful of vichy should be given. If artificial feeding is adopted, the milk should be sweetened with glycerine or saccharin, and vichy should be added to it. No cereals should be allowed. Later, beef broth or eggs may be given. After the child has been weaned, milk or cream should be given, diluted with water, sweetened with glycerin. A porridge of gluten flour may also be used, the amount of which should be gradually diminished. Eggs, chopped meat, and green vegetables should be given early in these cases. Later the diet may be regulated very much like an adult's. Care should be taken, however, not to push the meat diet too strenuously, as this may lead to acid intoxication. The urine should be frequently examined, and the patient weighed several times a week.

If emaciation increases rapidly, and if there is threatening coma, or acid intoxication, the diet should be made less strict. During the coma, purgatives, stimulants and large doses of bicarbonate of soda are indicated. Success is exceptional, however.

So far as medicinal treatment is concerned, it should be used with moderation in the diabetes of children. Of the drugs, quinine, iron, cod-liver oil, arsenic, opium, antipyrin, potassium bromide and the alkalies may be of value. If there is hereditary syphilis, mercury and iodides are

indicated. Alkaline mineral waters have been praised by some writers. Arsenical waters or small doses of Fowler's solution may also be tried.—*Med. Rev. of Reviews.*

CHILBLAINS.—Prophylaxis consists in improving the general health, as it is mostly the physically impoverished who fall easy victims to this annoying trouble, particularly those whose vasomotor innervation is unstable. Persons of this type should, with the advent of the cold season, take particular care to keep their digestive system in perfect order, as easy digestion contributes in a high measure towards the proper distribution of blood to the extremities and body surface in general. Neurotic tendencies must be patiently combated by proper living, good food, wholesome occupation, avoidance of undue exposure to sudden changes of temperature. In severe weather the wearing of warm, dry footwear, gloves and ear mufflers should not be neglected. Attention to the above rules would make the occurrence of chilblains much less frequent.

In the treatment of an actual case of frostbite the first injunction is never to attempt to warm up a frost bitten member too rapidly by bringing it either in contact with or in the proximity of any source of heat, as this would almost certainly paralyze the circulatory mechanism of the affected part and possibly lead to gangrene. On the contrary, the parts should be thawed out very gradually by gentle and prolonged friction with snow or cold water, after which a wet dressing of lime water, boric acid, borax, sodium bicarbonate or alcohol and water should be used for about 24 hours, and this, in turn, should be followed by the free application, twice a day, of some fat like lard, either plain or medicated with balsam of Peru.

As one attack of chilblains acts as a strong predisposing factor in the future, the patient's attention should be directed to all the prophylactic measures mentioned above, and, where conditions demand, proper medication should be employed.

In chronic chilblains, besides the observance of the above rules, the daily bathing of the affected parts with alcohol and water or salt water, followed by painting with equal parts of tr. iodine and tr. benzoin co.; or gentle friction with tr. iodine, one part; linimentum camphoræ, three parts. Or tr. capsici, one part, and lin. sapon., six parts. Or the following ointment may be gently rubbed in twice a day in subacute and chronic cases:

R Mentholi, 5 grains.

Chloralis, 10 grains.

Champhoræ, 10 grains.

Adipis, 1 ounce.

Diachylon ointment, or an ointment consisting of one part of chlorinated lime (calx chlorinata U. S. P.) and nine parts of benzoated lard is very effective.

If ulcerations occur they must be treated antiseptically in the same manner as ulcer from other causes. Painting with a 10 per cent. solution of silver nitrate is effective and seldom fails to accomplish desired results.—*Therapeutic Medicine.*

THE TREATMENT OF MOLES BY CARBON DIOXIDE.—Macleod states that carbon dioxide has all the advantages of liquid air and none of its disadvantages. He obtains the carbon dioxide snow by allowing the gas to escape rapidly from a tube into a piece of porous material. Practically speaking, his method of preparation is similar to that described by Dr. Ralph Bernstein, of Philadelphia. He then applies the pencil of solidified carbon dioxide thus obtained to the lesion to be treated. No anæsthetic is needed.

Angioma of infants reacted most satisfactorily to this treatment. The largest case treated was 2 inches long and $1\frac{1}{2}$ inches broad. But there is no limit to the size which can be successfully attacked. When the nevus is very soft a single exposure of twenty seconds may suffice to remove it; if it be harder, owing to the presence of fibrous tissue, several exposures at intervals of ten days may be required.

It is advisable to let the inflammatory reaction completely subside before a second application is made, as involution is set up, which continues for a considerable time after the acute inflammation has gone down. One of the chief merits of the treatment is the nature of the resultant scar, if it can be called a scar, for in many of the cases it is difficult to detect any cicatrix.

Several cases of port-wine stain were treated by snow without improvement. Telangiectatic or stellate nevi were removed by a single application of the carbon dioxide snow of five seconds. The treatment has no advantage over that of a fine-pointed cautery or an electrolytic needle. Pigmented and hairy moles may be appreciably reduced, and in some cases satisfactorily removed, by the snow, with a cosmetic result which is superior to other forms of treatment.

In lupus vulgaris where the lesions are superficial in type the snow is of definite value, but in deep-seated lesions it seems to be less effective and penetrating than Finsen light.

Lupus erythematosus did not react as well to the snow as it did to zinc ionization.

Rodent ulcers, if superficial, were cured. The author thinks that in this affection the treatment does not seem to be much better than the careful application of the actual cautery, and where the lesions penetrate deeply it is of less value than radium.—*British Medical Journal*.

CRATÆGUS OXYACANTHA has been used for a period extending over two years by Dr. Thos. F. Riley, and he reports as follows: "It has been of decided benefit in a few cases of non-compensatory valvular disease, in which there was an idiosyncrasy to the use of Digitalis. It has no decided diuretic action, nor does it raise blood-pressure to any appreciable extent. Cratægus is essentially a mild cardiac tonic. When the heart is in a weak and irritable condition following grip or in neurasthenia with a marked arrhythmia of the respiratory type, agents of the Digitalis group are almost invariably badly borne. This is often a result of the digestive disturbance they so frequently entail. Here the Cratægus often acts surprisingly well. It is a perfectly safe agent with no poisonous effect. It can do no harm in aortic disease and is worthy of trial in these troublesome cases. In fatty degenerations and in heart lesions with high arterial pressure it should be a useful agent. It is better given during or after meals

in doses of from 10 to 30 minims of a good fluid extract or a dram of the tincture. A combination with the Bromides is useful in the irritative condition spoken of above."—*Medical Century*, May, 1910.

MICE AS INFECTION CARRIERS.—In the Parasitologic Institute of Turin, Dr. Barabaschi carried on a number of interesting studies with regard to mice in the transmission of common infections. In the colon, feces and urine a rather complete bacterial flora was found; various species of streptococci, bacillus anthracis, pneumococci, the hosts carrying these last micro-organisms being caught in a house where a pneumonia patient was convalescing. All physicians know of household epidemics of this disease when the source of infection is difficultly determined. The investigations of Barabaschi may shed light upon the genesis of the trouble. Though the stomach of the animal may destroy a portion of the infecting agents, it is always possible that others, protected by particles of food, pass out with the fecal mass. It is well known that in the transmission of bubonic plague, rats and other rodent species (Klein) play a similar role.

The late Dean Dickenson, he of sweet memories, gives Vaccinum and Variolinum favorable mention in his *Principles and Practice of Medicine*. Johnson states in his *Therapeutic Key* that they mentioning Vaccinum and Variolinum under one head, cut the disease short, rendering it mild, they promote suppuration, dessication and prevent scars. Dewey's *Practical Therapeutics* mentions Variolinum. Arndt recommends its use in the 6x and 12x triturations. Raue's *Diseases of Children* states that Jahr treated all cases with Variolinum as soon as the diagnosis could be made out, that failing he followed with Sulphur. Bartlett names Vaccinum as one of the remedies to be used when the eruption appears. Goodnow praises Vaccinum stating that he had no deaths in sixty cases while many were dying in the neighborhood with smallpox. The elder Raue praises Variolinum. Cowperthwaite gives both remedies favorable mention.

Individually I give Variolinum 20x to 30x as soon as the diagnosis can be made out, anything else being clearly indicated the patient gets it.—Dr. A. H. Barker on the Treatment of Smallpox, *Iowa Hom. Journal*, July, 1910.

SILICA.—30 is recommended of great service in advanced phthisis, in relieving many distressing symptoms to which it is homœopathic. Here it corresponds to Stannum iodatum, which also is of frequent application in the more advanced forms of phthisis, while Arsenicum iodatum corresponds more to the earlier stages.—*Medical Century*, May, 1910.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY A. LEIGHT MONROE,

Miami, Florida.

SOME REMEDIES IN DISEASES OF THE EYE.—*Kali muriaticum* is very useful in parenchymatous keratitis. The following case recorded by Norton serves to illustrate its usefulness. The patient was 35 and for three months there had been an infiltration into the right cornea, which commenced at the outer edge and extended over the whole cornea. He could only count fingers. There was occasional pain, moderate photophobia and redness. The pupils dilated slowly and incompletely, though regularly under atropine, and contracted quickly. Aurum mur., Cinnabar and other remedies, with atropine externally, had been used with no benefit, except some relief from pain. Under kali mur., 6th dec., the inflammation was soon arrested and the cornea cleared. In three months R. V. 20-30. The improvement has continued.

Lachesis is certainly a great remedy. It is as useful to the oculist as to the general practitioner. It is indicated in those deep-seated conditions in which sluggishness of the venous circulation is the predominating factor and the tissues are dark red. There is dimness of vision and black flickering before the eyes, which frequently makes reading difficult. The eyes are sensitive to light and there is apt to be a beautiful bright blue ring about the flame. It is useful in orbital cellulitis with marked protrusions of the eye and chemosis. Purulent discharge and sloughing with a black spot at the center of slough. This remedy may also be useful in phlyctenular keratitis with marked photophobia, which is always worse in the morning and after sleeping, this aggravation of the drug being peculiarly characteristic. It is often indicated in intra-ocular hemorrhages and in this condition should be compared with *crotalus*.

The *Mercuries* form another valuable group of remedies in eye diseases. They are deep-acting drugs and are probably more frequently indicated in chronic, deep-seated inflammatory and ulcerative processes. In corneal diseases especially, and in iritis, iridocyclitis, albuminuric retinitis and for the absorption of retinal hemorrhages and building up the walls of the blood vessels Merc. corr. will be found to be a great remedy. The photophobia is excessive and the lachrymation profuse and ichorous often excoriating the lids and cheeks. There is much pain in and around the eye and at night the pains are very severe, the aggravation at night being particularly prominent.

Iodide of Mercury is especially valuable in dacryocystitis and in cases of blepharitis of syphilitic origin, if the accompanying symptoms point to its use. Ulcerations of the cornea especially beginning at the margin and extending, involving only the surface layers, leaving the appearance as if

scooped out with the finger nail. Also in the so-called snake-like or serpiginous variety of ulcerations of the cornea. The pains of this drug are also aggravated at night accompanied by the other symptoms and there is in nearly every case a thick yellow coating at the base of the tongue with swelling of the glands in other parts of the body so characteristic of this remedy. Cases of paralysis of the oculo-motor nerve in syphilitic conditions have been cured by Merc. iod.

Mercurius solubilis has for many years been one of the prominent remedies in ophthalmic practice.

Inflammation or *Blenorrhoea* of the lachrymal sac should suggest this remedy, especially if there is considerable swelling and pain at night, or if the discharge is thin and acrid in nature, and the general condition of the patient at the same time calls for it. For *fistula lachrymalis*, with external ulceration resulting from syphilis, it has also proved useful.

In *blepharitis* there is no better remedy, if the lids are red, thick and swollen and sensitive to heat, cold or touch. The lachrymation is profuse, burning and acrid, making the lids sore, red and painful, especially worse in open air or by the constant application of cold water. The symptoms are all worse at night, in bed and by warmth in general, also from the glare of fire, which is unusually painful. It is especially indicated in ciliary *blepharitis* caused by working over fires or forges, or by gaslight.

In superficial inflammation of the cornea and conjunctiva, either ulcerative, *phlyctenular* or *catarrhal*, *Mercurius* has proved especially serviceable.

The dread of light is generally very marked, in some cases so intense that the eyes can hardly be opened, even in a darkened room, and is more often aggravated by any artificial light, as gas light or glare of fire. The lachrymation is profuse, burning and excoriating and the muco-purulent discharges are very thin and acrid. The lids may be spasmodically closed, are thick, red, swollen, even *erysipelatous*, excoriated by the acrid discharges and are very sensitive to heat, cold or contact; there is usually biting and burning in the lids, sometimes a feeling as if there were many fiery points in them; worse in the open air. The general aggravations in the evening, by gas light and at night after going to bed are of the first importance. *Keratitis parenchymatosa*, dependent upon hereditary syphilis, very frequently calls for *Mercurius*, which has proved extremely valuable in this affection.

Mercury has always been and probably always will be the principal remedy for *iritis*. The *solubilis* has been employed with great success in many cases, though it is not as commonly useful as the *corrosivus*. It is especially called for in the syphilitic variety and when *gummata* are present in the iris, though its sphere of usefulness is not confined to this form. It may be indicated in *rheumatic* or any other form of *iritis*, in mild cases as well as severe, when *hypopyon* is present as well as when it is absent. The usual symptoms of *iritis*, contraction, discoloration and immobility of the iris, ciliary injection, haziness of the aqueous, etc., are of course found, but the characteristic indications are to be looked for in the pains, which are usually of a tearing, boring character, chiefly around the eye, in the forehead and temples, which are often sore to touch; with this there may be throbbing, shooting and sticking pains in the eye, all of which are always worse at night.

In *retinitis* or in *choroiditis*, particularly if dependent upon syphilis, this

remedy has been employed with benefit. In these cases the retina is often very sensitive to the glare of fire. It is the great remedy for diseases of the optic nerve and retina occurring in workers in foundries.

Natrum muriaticum has redness of the margin of the lids and in the morning the eyes are agglutinated with scabs. In well developed catarrhal affections of the margin of the lids, which become red and burning, especially in the evening while reading; much secreted mucus and agglutination in the morning on waking. Spasmodic closure of the lids. Irritability of the margins of the lids and their conjunctivæ. Lachrymation in the open air. Acrid lachrymation which makes the canthi red and sore. Redness of the white of the eye, with lachrymation. Redness and inflammation of the white of the eye, with a feeling as if the balls were too large and compressed. Inflammation of the eyes and lachrymation in very slight wind. Giving out of the eyes. The eyes give out on reading or writing; with a pressure in the right eye, extending into the head, disappearing on walking about the room. Pressure in the eyes on looking intently at anything. Unsteadiness of vision; objects become confused on looking at them.

It is very useful in certain forms of blepharitis in which the thick, inflamed lids smart and burn, with a sensation of sand in the eye and acrid lachrymation, which excoriates the lids and cheek, especially if caused from caustics.

Dr. F. H. Boynton first called attention to *Natrum mur.* as a valuable remedy for follicular conjunctivitis. It is useful in this form of inflammation of the conjunctiva, in which the follicular formations are chronic and chiefly confined to the oculo-palpebral folds. It has been of service in these cases when complicated with true trachoma.

In pustules and ulcers of the cornea much benefit is frequently derived from the administration of *Natrum mur.*, especially in *chronic recurrent cases*, though the symptoms which lead to its selection are not particularly characteristic. The skin of the face around the eye is often glossy and shining, while the lips may be sore and the corners of the mouth cracked.

In asthenopia, particularly muscular, and dependent upon overuse of the eyes, in either ametropia or emmetropia, *Natrum mur.* is a most important remedy.

Rhus toxicodendron is another of our great drugs in ophthalmic affections. It seems especially adapted to the severe forms of inflammatory diseases, especially in rheumatic subjects, with a tendency to the formation of pus at the site of inflammation. The lids are swollen, with much lachrymation, the characteristic of this lachrymation being the great flow of tears from the eye upon separating the lids.

For orbital cellulitis it is a remedy of first importance and will no doubt be oftener called for than any other drug, whatever may be the origin of the trouble, as the picture of the disease corresponds very closely to the symptomatology of the drug, and experience has proven the truth of the assertion that it is the remedy for the treatment of this dangerous malady. Some alarming cases of this disease have been promptly arrested by this drug. In one case, one eye was entirely lost and had been operated upon with a view of providing free exit for the suppurative process and the disease was making alarming and rapid progress in the other eye. *Rhus* speedily arrested its progress (Norton).

In ulcers and pustules of the cornea Rhus has often been employed with success, especially in the latter and superficial forms of ulceration in which the photophobia is very great, so that the patient lies constantly on the face. The lachrymation is very profuse, so that the tears gush out on opening the spasmodically closed lids, which are usually much swollen, especially the upper. The conjunctiva is quite red: chemosis. The skin of the face around the eyes is often covered with a Rhus eruption. The remedy is especially suitable to persons of a rheumatic diathesis. The symptoms are usually worse at night, after midnight and in damp weather; therefore the patients are restless at night and disturbed by bad dreams.

Its action, however, is not confined to the superficial variety of keratitis, as great benefit has been observed from its use in suppuration of the cornea, especially if consequent upon cataract extraction.

Its grandest sphere of action is to be found in suppurative iritis, or in the still more severe cases in which the inflammatory process has involved the remainder of the uveal tract, especially if of traumatic origin, as after cataract extraction. As a remedy in this dangerous form of inflammation of the eye it stands unrivalled, no other drug having, as yet, been found equal to it in importance in this serious malady. The symptoms of the drug will be seen to correspond very closely to a great majority of the cases. The lids are red, swollen and edematous, especially the upper, and spasmodically closed, with profuse gushes of hot tears upon opening them; sac-like swelling of the conjunctiva and yellow, purulent, mucous discharge; pain in and around the eye; swelling of the cheek and surrounding parts, besides the usual concomitant symptoms.

Hiccough.—*Agaricus.* There are spasmodic twitching of the muscles, especially face and upper extremities; hiccough causes the shaking of the whole body; empty eructations alternate with hiccough, worse in the evening.

Agnus Castus.—The hiccough appears with irritability; the patient is inclined to get angry and peevish.

Ammonium Carbonicum.—Hiccough appears in the morning after being exposed to a chill.

Belladonna.—There is severe hiccough, so that it jerks the patient up, even with a sensation of suffocation; hiccough with convulsion of the left arm and right leg alternating; violent hiccough after midnight; hiccough at night with copious sweat; hiccough after breakfast.

Bismuth.—The tongue is thickly enveloped with a white coating; there is thirst, drinks enormous quantities of water and vomits it immediately; the water is only vomited, but the food is retained; there is great prostration, but the surface is warm; there is pressure in the stomach after a meal; constant gagging is present; the eructations are present and they are sometimes bad smelling.

Carbo Vegetabilis.—The hiccough appears from the slightest cause; it is aggravated after eating and drinking.

Bryonia.—Hiccough after eating and drinking and aggravated by the slightest motion; great thirst.

Cicuta Virosa.—It has loud sounding, dangerous hiccough; there are frequent involuntary jerking of the arms and fingers; the patient hankers after charcoal.

Colchicum.—The hiccough appears and lasts for hours at a time; there is burning in the stomach or icy coldness, also in the abdomen; extreme retching and vomiting exist.

Cyclamen.—Eructations appear with hiccough.

Hydrocyanic Acid.—It may be given when other remedies fail to do any good.

Hyoscyamus.—Hiccough appears with cramps and rumbling in the abdomen; severe hiccough at midnight, with involuntary urination and frothing at the mouth, accompanied by constipation.

Ignatia.—Hiccough comes on after drinking, eating or smoking; hiccough in the evening.

Laurocerasus.—Constant hiccough with long-continued fainting.

Lycopodium.—Frequent hiccough after a meal or after smoking; frequent empty eructations; loud rumbling of flatus in the abdomen, particularly in the left hypochondrium.

Nux Vomica.—If the hiccough comes on by taking any cold drink, or appears before dinner.

Pulsatilla.—It is used when hiccough appears after taking any cold fruit or after drinking. Vomiting brought on by ice, fruit, pastry, fat; the face is pale and chilliness reigns.

Ratanhia.—There is violent hiccough and the stomach is painful.

Phosphorus.—There is severe hiccough during the day, even before eating; hiccough appears after dinner, and it becomes so violent that the patient experiences pressive pain at the pit of the stomach, as if it were sore; hiccough continues for a long time.

Strontium Carbonicum.—Violent hiccough; sickness comes on after all food, sometimes quickly, sometimes after an hour or two; pressure in the stomach, aggravated by walking and ameliorated by eating.

Staphisagria.—There is frequent hiccough, with nausea; sensation as if the stomach and abdomen were hanging down, relaxed; there is longing for tobacco; hiccough, often severe, after eating.

Sulphuric Acid.—There are empty or bitter risings; sour eructations and severe heartburn; severe hiccough; pyrosis; there is nausea in the stomach, and shivering; sensation of coldness or burning in the stomach.

Veratrum album.—Hiccough after hot drinks; nausea with a sensation of fainting and excessive thirst.—*Ind. Hom. Rep.*

TREATMENT OF ENDOCARDITIS.—J. B. Brown, M. D.—In the acute stage Aconite is the principal remedy. There is intense fever, hard, quick pulse, restlessness, energetic pulsation, cutting pains, redness of face, thirst and a heavy feeling over the precordial region.

When the pulse is full and bounding, with high fever, Verat. vir. is indicated.

Spigelia is indicated when the disease has reached its height, agonizing pains in precordial region, extending over the bronchial plexus of nerves, neuralgic pains, pulse irregular and intermittent, syncope and dyspnoea, pulse may become slow.

Cactus Grand.—Great anxiety and pains intense, heart feels as if grasped by an iron band, suffocation, pulse weak and irregular. It never fails when given according to the above symptoms.

Belladonna.—Bounding pulse, red flushed face, head throbs, pains severe and lancinating, come suddenly and leave suddenly, body moist.

Arsenicum.—Great restlessness, nocturnal aggravation, syncope, anasarca, severe pain, scanty red urine, weak and prostrated, more often indicated in the malignant form; acts better when given high.

Quinine is called for when the fever becomes intermittent and symptoms of malignancy occur, pulse accelerated, small and irregular, loss of strength, complete collapse, coldness, bluish appearance and syncope.

Lachesis.—In extreme malignancy, prostration, choking sensation, horrible exciting dreams. Awakens with a start and a feeling that it is his last breath. Very weak, hematogenous jaundice.

Vipera.—The last stages, pains around the heart, cannot move, dyspnea, the system has reached its lowest ebb from the toxemia.

Crataegus.—Usually indicated following rheumatism.

In conjunction with the medical treatment a selected diet must be prescribed. The patient must have perfect rest, the room kept darkened and quiet; no visitors or unnecessary talking at the bedside; if very nervous some nerve sedative is indicated, like *Passiflora*, *Coffea* or *Mono-bromide of Camphor* for children, *Sulphonal* in older persons. There are conditions when the physiological dose of *Digitalis* or *Sparteina* is indicated in conjunction with the indicated remedy, but the former especially must be used with considerable care, as it has a cumulative effect.—*Progress*.

ACNE.—Internal Treatment. Walter Joel Brown, M. D.—Great reliance may be placed on the indicated remedy. Indications for more frequently indicated remedies are:

Nitric Acid.—Many small pimples on forehead just below the hair.

Phos. Acid.—Acne in weakly persons, onanists and victims of spermatorrhœa.

Antimony Crudum.—Acne in drunkards, with gastric derangements, severe thirst and white coated tongue.

Antimony Tart.—Obstinate cases with longing for acids and where there is decided tendency to pustulation.

Arsenicum.—Chronic cases with dry, rough and dirty looking skin.

Baryta Carb.—Obstinate cases, especially where the papules or pustules are interspersed with comedones.

Belladonna.—Large, bright, red pimples on the face, back and scapulæ, especially in young, full-fledged people.

Chelidonium.—Pimples and pustules in groups of three and four on the face, except the chin; chiefly on the left side. Acne dependent upon liver derangement.

Conium Mac.—Obstinate, indurated acne of the face; especially adapted to scrofulous persons and old maids or after suppression of menses.

Echinacea.—Small yellow pimples with bright redness of skin extending over quite an area; acne from auto-intoxication or septic conditions.

Graphites.—Acne in persons inclined to obesity; particularly females with disposition to delayed menstruation. Skin very dry, inclined to crack, and easily tends to ulceration.

Hepar Sulphur.—Unhealthy skin; inflammation and suppuration of the affected part.

Iodium.—Indurated acne in scrofulous subjects. Adapted to young persons with dark hair and eyes, and rough, dry skin.

Kali Brom.—Acne on face, neck and shoulders, with peculiar yellow points which neither coalesce nor burst.

Ledum.—Small red pimples, especially on the root of the nose.

Merc. Sol.—Dirty yellow color of the skin with glandular swellings; indolent bluish-red papules.

Nux Vomica.—Acne with dyspepsia and constipation; after over use of coffee, liquors or tobacco; persons of sedentary habits.

Pulsatilla.—Amenorrhea; chlorosis; gastric and bilious disorders aggravated by pastry and fat food.

Sepia.—Acne on the chin, during pregnancy and nursing.

Sulphur.—Acne of adolescence with black pores in the face; chronic cases.

Thuja.—Acne on the alæ nasi, worse during menstruation.

Other remedies which are highly recommended for this condition, but for which I am not able to give special indications are: Fluoric acid, psorinum, and selenium. The following also have frequently been indicated: Aloes, berberis, borax, ichthyol, kali bi., kali iod., phosphorus and rhus tox.—*Progress*.

HYDRASTIS.—A valuable remedy in constipation, stools light colored, hard and lumpy—child seems weakened from use of laxatives. The rectum may be prolapsed and sometimes fissures are present.—*July Med. Century*.

(In chronic prolapsus of rectum in children try Calc. Fluoricum.—Ed.)

GUAIACUM.—By P. A. Krichbaum, M. D. This is one of Hahnemann's antipsoric remedies, affecting every tissue of the body. Guaiacum is a neglected remedy. In my opinion there have been many cases brought back to health slowly and indirectly by such remedies as nux vom., rhus., merc. and psor., when guaiacum would have directly cleared up the whole train of symptoms.

It is pre-eminently a remedy for gout and rheumatism, if the symptoms agree. A typical guaiacum patient, if there be such a thing, is one of dark complexion, tall, angular, large frame, with a not over active mind or body. Stupid at school; never learned very rapidly nor entered heartily or enthusiastically into play. They are usually termed lazy. Can be only temporarily enthused over anything. Would rather sit and dream dreams by the hour. Growing pains are complained of in childhood. Unless this growing guaiacum child is properly looked after in youth, puberty may bring consumption, gout or rheumatism.

I have dwelt, to some extent, upon the guaiacum youth that we may be able to foresee and provide for the after picture, when the joints become involved. As was the boy so is the man. He sits yawning and stretching for hours. Is so exhausted that he dreads to move. Dissatisfied, impatient and fault-finding with everyone. His whole body feels drawn up and contracted. His sleep does not refresh him, and it takes most of the forenoon to pull himself together. Feels better in the afternoon, when he is liable to have some fever.

Weakness runs all through this remedy. His thighs are too weak to support his body. He becomes too tired to sleep or sleeps only in a restless way with disturbing dreams.

There are actual contractions in all affected muscles, whether of eyes, legs, uterus, or bladder. These contractions prevent motion. Incipient and localized tuberculosis in patients that are always chilly, even by a warm fire. They sweat about the head, have dilated pupils, and lassitude.

Dry cough with loss of breath. The cough comes from tickling in the pit of the stomach. In advanced tubercular cases, the patient coughs and hawks up copiously a fetid pus. Excretions are all intolerably offensive, from the bowels, nose, ear and bladder and uterus.

Stitches in the region of the second, third and fourth ribs, more often the left side, and when there, is aggravated by inspiration. The difficulty is more from contraction than from inflammation. There may be no fever; Pleurisy, when the aconite and bryonia fail to relieve the stitching pains.

Abscesses in any part of the body, bones or muscles; in rheumatism or tuberculosis. Quinsy in tubercular, rheumatic or mercurialized patients, the tonsils are swollen, red, burning and very sensitive to touch, aggravated by heat. Burning is the most pronounced symptom. When curative in quinsy, guaiacum produces a sweat, as the first indication of relief. It will abort more cases of quinsy than any other known remedy. Why? Because quinsy is apt to attack persons who have a tubercular or psoric tendency.

Ozanam says, it combines the properties of bell., apis and baryta carb. It has the erythematous or inflammatory angina, with the bright redness of bell., the œdema of apis and the phlegmon with tendency to suppuration of tonsils of baryta carb. and apis.

All the affected parts of guaiacum are sensitive to touch and aggravated by heat, whether the pain be in bone, muscle, or fibrous tissue, but general heat is soothing.

Sticking pains in the tonsils, sticking pains in the head, ears, bladder, urethra, chest, everywhere. These sticking pains come in the teeth, when biting. The teeth appear too long. The whole mouth is red, sore, burning and sticking, the pain takes away all desire for food. The tongue is so thickly furred white or brown, as to interfere with taste.

Neuralgia on the left side of the face, which comes on in the early twilight and lasts all night. With this there is drawing in the muscles, sticking pains, the mouth is dry.

Glaucoma where the eye is tense, and the upper lid contracted (causticum has ptosis). In cases of laryngeal inflammation in which there is dyspnea with violent beating of the heart. The patient awakens short of breath, palpitation that shakes the whole body, sudden dry cough, frequent and repeated until a little mucus comes.

Constriction or actual contraction with burning, runs through every affected organ and tissue. The stomach feels as if there was a band around it which interferes with breathing. The abdomen feels contracted or drawn, with pinching pains, relieved by passing flatus. The bladder is constricted, causing frequent urination, with continuous desire to urinate, even just after evacuation. The urine is horribly offensive. In fact so are all the secretions, whether from the tonsils, lungs, bladder, uterus, bowels or from abscesses. Do not give psorinum because of this offen-

siveness of the discharges and the added fact that the patient may be chilly; take the patient as a whole.

Guaiacum promotes suppuration of abscesses in soft or hard tissues, with offensive discharge; do not forget the sensitiveness, and aggravation from local heat. The remedy affects the joints, producing rheumatic and arthritic pains. It acts upon the fibrous tissue causing pain from the least motion. This aggravation is from actual contractions. The joints are painful and intolerant of pressure, can bear no heat. The chest pains may involve the articulation, in fact the pain is frequently located in the articulations of the ribs.

Suppuration of bone in tubercular or syphilitic patients where there is the sensitiveness and the aggravation from heat. Caries of bone. Guaiacum promotes the spontaneous breaking up of gouty abscesses.

I have by no means exhausted it, or given all the symptoms of this noble remedy, but if anyone is hereby inspired to study guaiacum in its entirety, I will feel that my paper has not been in vain.

Briefly summing up, I would say, do not forget the contractions, the offensive discharges, the sensitiveness to touch, the aggravation from local heat with the desire for heat in general, the temperament, the rheumatic, gouty and tubercular patients, the slowness of comprehension, and dread of motion, the fault-finding and dreamy nature with desire for sleep, and you will have a picture that will point you to the administration of guaiacum.—*Medical Advance*.

REMEDIES FOR COUGH.—*Belladonna*...A dry cough, spasmodic cough, with dryness, rawness and scraping in the larynx. Every now and then you get attacks of suffocation with the paroxysm of cough. The only time you find anything like moisture with the belladonna cough is when a person suffering with chronic catarrh contracts a cold. Then the mucus is seen and left in shreds.

Spongia.—A dry suffocating cough with soreness and burning in the chest. The patient is very hoarse. There is a sense of constriction of the larynx which makes the respiration difficult. The difficult respiration often accompanies the dry metallic cough, and there is a feeling as if the breath passes through some porous substance. *The dry cough and constriction are both relieved by eating and drinking.*

Rumex.—An incessant, dry, spasmodic cough, worse by breathing cold air, by lying down, at night. The irritation causing the cough is from mucus which produces a tickling behind the sternum. The time of day is from 10 to 12 p. m. *There is relief from covering the head and breathing under the bed clothes.*

Sticta.—A nervous, dry, incessant, hacking cough, sometimes in spasms like whooping cough. Usually a remedy for nervous, reflex cough and whooping cough, but occasionally the incessant irritating cough of measles. Although nothing seems to ameliorate the cough of sticta, *it is decidedly worse towards evening, or when the patient is tired.*

Causticum.—A hollow, dry, hoarse cough with soreness and rawness down from the trachea. The causticum cough is the opposite of rumex in that it is worse when covered up warm in bed. *It is relieved by sips of cold water.* The feeling as if there were mucus in the larynx which

the patient cannot get under and raise is very marked in causticum. With the cough the patient involuntarily voids urine.

Bryonia.—A dry, hacking cough from irritation in the upper part of the trachea. Every time the patient coughs there is a feeling as if the head and chest would burst. The bryonia cough is sometimes called a "stomach cough," because it is aggravated by eating and drinking. With the cough there is a sharp sticking pain beneath the sternum; in fact, all through the chest. After a few hours the cough may become just a little moist and you have a slight amount of mucus streaked with blood, expectorated. *The marked aggravation of this cough is from coming from a cold into a warm room.*

Phosphorus.—A dry, rough, hoarse cough, with tightness or oppression of the chest and spurring of urine during the cough. Phosphorus has two marked aggravations—*First talking, laughing and singing; second, going from warm into cold air.* There is a good deal of burning in the larynx, also beneath the sternum. Notwithstanding the dryness of the cough and burning you may have mucus frothy, blood, purulent mucous expectoration. With the cough of bronchitis and pneumonia the phosphorus patient cannot lie on the left side without attacks of suffocation.

Ipecacuanha.—A constant, rough, shaking, ineffectual cough. Ineffectual in the sense that mucus, of which there is a large amount in the bronchial tree, cannot be dislodged by coughing. *The cough causes much nausea, "gagging," and sometimes vomiting.* With the different conditions in which you find ipecacuanha cough you have a *wheezing, whistling in the chest.*

Hepar Sulph.—Hepar seems to have a dual cough as well as a dual action for suppuration. It is useful for a dry and for a moist cough. The dry cough is usually worse in the evening, the moist loose cough in the morning. *The keynote to either variety is "cold" and "cold air."* If a draft of air strikes the patient or if any part of the body becomes cold the mucus of the loose cough seems to tighten and the paroxysm of the cough becomes more violent and prolonged. "Cold" and "cold air" also aggravate the dry cough. The hepar patient always sweats when coughing.

Tartar emetic.—Coughing and gasping in alternation, a loose cough with little expectoration, much rattling of mucus in trachea. The cough compels the patient to sit up in order to breathe. The face is pale, cool and moist. The pulse is rapid, weak and trembling. Great rattling of mucus in the chest is the keynote to the remedy.

With the belladonna, spongia, sticta and causticum, I habitually use cold water compresses as follows: Dip a piece of linen in water at temperature of 60 or 65 and wrap around the neck. Over this put a flannel cloth to protect the clothing. Change as often as it becomes dry.—*Iowa Medical Journal.*

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THE SURGICAL TREATMENT OF TIC DOULOUREUX WITH SPECIAL REFERENCE TO THE METHOD DEPENDING UPON INJECTION OF ALCOHOL INTO THE MAIN BRANCHES OF THE TRIGEMINAL NERVE.

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TIC DOULOUREUX has been, until recently, one of the most unsatisfactory conditions with which physicians have had to contend. The truth of this statement becomes apparent when we remember that the average case, having exhausted different forms of medicinal treatment, suffered so extremely that most, if not all, of the teeth were sacrificed in vain attempts to obtain relief, and that various operations were performed with but transient beneficial results; some cases having been operated many times. Indeed, not a few of these cases became drug habitues, and some even committed suicide because the excruciating pains rendered the continuance of life intolerable. Because of the inefficiency of medical treatment, of the inevitable recurrences which followed the older surgical measures, and because of the almost unbearable pain which these patients suffer, any modern operative, or other means of treatment which is capable of curing or relieving the condition to

an extent that is satisfactory to the patient, should be welcomed and popularized.

At present there are two kinds of operations which offer almost positive assurance of complete and permanent cure; no matter how severe or hopeless the case may appear to be. These methods are: Partial or complete excision of the Gasserian ganglion; and section or avulsion of the sensory root of the fifth nerve—the so-called physiologic extirpation of the Gasserian ganglion. Operations peripheral to the ganglion offer but temporary relief, and, almost in all cases, the neuralgia may be expected soon to return with all its former severity.

In 1906 Sherren (1) expressed the opinion that, until the possibility of regeneration of the posterior roots after section had been definitely settled, removal of the Gasserian ganglion, an operation which is known to be curative, should be the method of choice. More recently, Frazier (2) has asserted that division or avulsion of the posterior root positively cures *tic douloureux*, and that it has been demonstrated, both by animal experimentation and by clinical observation, that regeneration of the posterior root is not possible. That regeneration cannot occur is dependent upon the fact that non-medullated nerve fibres do not regenerate.

Avulsion from the pons of the sensory root alone is recommended by Cushing (3).

The advantage of operating upon the sensory root lies in the possibility of sparing the motor functions of the fifth nerve.

Besides presenting many technical difficulties operations upon the Gasserian ganglion and its sensory root have a mortality of about 5 per cent. In speaking of the mortality of 3.7 per cent. in the collective statistics of Horsley, Cushing, Hutchinson, Lexer, Lloyd, Doellinger, and Frazier, Deaver (4) says that his mortality was higher than 3.7 per cent., though he has operated a number of cases of *tic douloureux*.

That gasserectomy not always is followed by a permanent cure is well known. Kiliani (5), for instance, has observed recurrence after four gasserectomies performed by the best surgeons.

The disadvantages of these operations are: High mortality as compared with that of other major operations; danger of intracranial complications; danger of panophthalmia and

other trophic disturbances appearing as sequellæ; substitution of anæsthesia for pain; heavy expense to the patient and loss of much time from his work; and the clinical fact that, in addition to all these other disadvantages, gasserectomy, at least, does not offer with certainty the prospect of a permanent cure.

In view of all these disadvantages it is fortunate that a new method of treatment has been discovered that will cure most of these patients without necessitating greater loss of time than that required by an ordinary visit to a physician, and which not only is painless, but practically is devoid of the possibility of dangerous sequellæ or of death. Injection of alcohol into the foramen of exit from the skull of the involved branch, or branches, of the trigeminal nerve is the method which possesses these advantages.

Before describing this procedure allow me to present some statistics concerning its therapeutic results. Of 60 cases of tic douloureux treated by Ostwalt (6) with injection of alcohol, 33 per cent. had recurrences within five months; the relapses being less severe and more amenable to subsequent treatment than was the original condition. According to Hussey (7) Schlösser, in 1907, reported before the Medical Congress at Wiesbaden 209 cases in which relief from pain continued for an average of one year from the time of injection. During almost three years Hecht (8) injected 48 cases from one to five times each. Of these, 32 were greatly improved, 8 were improved, 5 were unimproved, and 3 were aggravated. One year was the average length of time before recurrence took place. Since 1906, Kiliani (5) has injected 190 cases with but five failures. The average number of treatments required was three. Of these cases 42 per cent. have not yet (June, 1909) had any recurrence. In the remainder, recurrences appeared in from three months to two years. Included among the successfully injected cases of his series were four patients upon whom gasserectomies had been performed, and two who had been subjected to Abbe operations. One of his patients had been afflicted with the disease for 48 years and had submitted, with but temporary relief, to four peripheral operations, a gasserectomy, and then a fifth peripheral operation. After making four injections in less than a month the patient remained entirely free from pain (9). Patrick (10) reported 16 cases in 1907. In 14 cases whose histories

contained definite statements of the number of injections made, four was the average number required to effect a cure. His method was repeatedly to inject at intervals of a few days, and, in doubtful cases, to continue to do so even after pain completely had disappeared. Treatment was ineffectual in but one of his cases, and this failure he ascribed to his inability to place the alcohol in, or near, the affected nerve—the superior maxillary branch. In a later paper containing condensed reports of 75 consecutive cases Patrick (11) remarks: "I think that there can be no doubt whatsoever that when the injection reaches the nerve the pain is stopped at once. In this sense I have not had a single failure. The greatest drawback to the method is the uncertainty of reaching the nerve on any given trial. But if the patient is willing to persevere he is practically certain of relief. Of course, in many cases one succeeds the first time." Having made 24 injections in seven cases Ball (12) succeeded in curing six and in greatly improving one. This neurologist enthusiastically closes his paper with the statement: "My experience with it (the injection treatment) causes me to feel that in the whole realm of therapeutics we do not have a more successful procedure."

The alcohol injection treatment of tic douloureux was originated in 1900 by Schlosser, and later perfected by Lévy and Baudouin (13). It was developed from Billroth's method of injecting with osmic acid the peripheral branches. The instruments employed are an ordinary hypodermic needle, a hypodermic syringe, preferably one made entirely of metal or glass, and two sharply pointed needles fitted with blunt pointed stylets. One of these needles should be 1 5-8 inches long for injecting the inferior maxillary and the ophthalmic branches, and the other must be two inches in length to reach the superior maxillary branch. By discarding stylets Brissaud and Sicard are enabled to use needles of finer calibre. Besides rendering the operation more dangerous these needles are too delicate to permit the operator, while inserting them, to feel his way with their points. But two solutions are required, one being 1-2 per cent., or a 1 per cent., aqueous solution of cocaine, and the other a 1-5 per cent. solution of cocaine in 80 per cent. alcohol. The first of these is used to anaesthetize the skin, and the second to inject the nerve. Cocaine is added to the second solution only in order to overcome any pain due to the irritating effects of the alcohol.

In performing the operation a drop of the first solution is injected into the skin with the ordinary hypodermic needle. It is not at all necessary to anaesthetize the deeper structures. After waiting several minutes to allow the cocaine time to act the special needle, without stylet and unattached to the syringe, is thrust entirely through the skin. Then the stylet is inserted, to prevent injuring vessels, and the needle gradually and cautiously inserted to the desired depth. After withdrawing the stylet the syringe, filled with the alcoholic solution, is attached to the needle and thirty minims is injected. After removing the needle a drop of collodion serves to occlude the puncture. It is needless to say that the most scrupulous aseptic and antiseptic precautions must be observed.

The mode of action of the alcohol in curing these cases is not known. It seems probable, however, that it acts by setting up a sclerotic process in the nerve, thus preventing transmission from the periphery of painful impressions. In some resistant cases it may be necessary to increase to 90 per cent. the alcoholic strength of the second solution.

The number of injections required to cure a case varies greatly according to individual peculiarities in the patient, and according to the skill displayed by the operator in placing the alcohol in or near the nerve. From the statistics already mentioned it seems that from one to six injections may be required, and that the average case may be cured by about three injections. Probably it is best to inject once a week until all symptoms disappear. By giving the treatment at intervals of one week time is allowed for each reaction to subside before repetition of the injection. All who have written upon the subject have noticed that when more than one injection has been necessary almost always each has been followed by decided improvement, and that fewer treatments are required to cure relapses, even when these are late in appearing.

Very fortunately it is not always necessary to inject the solution into the nerve; close proximity being sufficient, in most cases, to effect a cure. When the injection is successful marked improvement generally is noticed at once, and the patient experiences immediate, and moderately persistent, numbness in the distribution of the injected branch. Absolute relief from pain not always is noticed at the termination of a successful injection, but improvement increases progres-

sively. For this reason a week may elapse before one knows the amount of success that has been attained. The duration of complete absence of pain varies greatly. Many patients injected by others not yet have had any recurrence. We may expect the majority to have incomplete relapses in a length of time varying from a few months to several years. An early relapse may signify that the injection was not entirely a technical success in that the alcohol was not placed close enough to the nerve.

The inferior branch is the one most frequently affected with *tic douloureux*, and, fortunately, it is the easiest one to inject. About 1 1-4 inches anterior to the external auditory meatus there is an upward curve to the inferior surface of the zygoma. To inject the inferior branch the needle should be inserted at the middle and highest portion of this curve. This point corresponds closely to one about one-half the distance between the coronoid and condyloid processes of the inferior maxilla. By keeping the needle perpendicular to the longitudinal axis of the skull, and by directing the point very slightly upward, the foramen ovale should be reached at an average depth of 1 5-8 inches. This distance may be increased or decreased about 1-8 inch according to individual variations in the conformation of the skull. During the insertion the point of the needle, after penetrating about one inch, should be kept about 1-8 inch from the base of the skull. By doing so at least one deep landmark is obtained. For a few days after injection of this branch a little soreness and stiffness is apt to be noticed about the articulation of the inferior maxilla. The possibility of danger lies in the proximity of the internal maxillary and transverse facial arteries, and in the fact that the middle meningeal artery enters the skull, through the foramen spinosum, about 1-8 inch to 1-4 inch posterior to the foramen ovale. None of these vessels, however, is known to have been injured during an injection.

The middle branch is reached by inserting the needle just beneath the inferior surface of the zygoma at a point 1-5 inch posterior to a perpendicular line dropped from the posterior border of the orbital process of the malar bone. The needle is to be directed perpendicularly to the longitudinal axis of the skull, but with the point inclined slightly upward to a degree that at a depth of 1 7-8 inches to 2 inches it will be on a level with the inferior extremity of the nasal

bones. I have not yet made this injection, but from practice on many different skulls I find that individual variations in the contour of the skull render most uncertain the successful attainment, by the point of the needle, of the foramen rotundum. The dangers consist in injecting the solution into the sphenoidal fissure, into the spheno-palatine foramen, or through the spheno-maxillary fissure into the orbit. Ball (12), who, on three occasions accidentally injected into the orbit, states that lack of resistance to the injection, and pain are the immediate signs of the accident, and that the later effects, which last for several days, are diplopia, and oedema and ecchymosis of the lids. To my knowledge there have been reported only four serious accidents resulting from injection of the superior and inferior maxillary nerves. In one case necrosis of part of the posterior portion of the upper right maxillary bone occurred in the practice of Levy and Baudouin (14). In his series of 75 cases of tic douloureux treated by injection of alcohol Patrick (11) had but three cases in which disagreeable complications resulted. One patient, aet. 65, whose inferior branch had been injected, developed keratitis with superficial ulceration. The other two cases had received injections of the middle branch. In one of these, aet. 76, some necrosis of the hard and soft palate occurred, and in the other, aet. 62, keratitis and ulceration appeared as complications.

To inject the ophthalmic branch the needle is inserted into the orbit, at a level with the fronto-malar suture, and the point passed along the external orbital wall to a depth of 1 4-8 inches to 1 5-8 inches, when the sphenoidal fissure should be reached. In this operation it is obvious that the other ocular nerves are very apt to be affected by the alcohol. Patrick (10) has performed this operation on but one patient (report of 1907) and in this case marked ecchymosis appeared, though therapeutically the first injection was unsuccessful. More recently he stated that he has abandoned, as being too dangerous, deep injection of the ophthalmic branch. Instead of this he injects at the supraorbital notch (11).

Before attempting any of these injections it is advisable to practice on as many skulls as possible in order personally to determine the direction in which the needle should be inserted for each branch, and to gain some knowledge of the many variations in the configuration of different skulls.

Case 1.—For three years Mrs. J., aet. 53, has been subject to severe pain in the left side of the inferior maxilla. One year after the onset she had all of the left lower teeth extracted without experiencing any relief. The pains were paroxysmal and occurred about every thirty minutes; each attack lasting from one to several minutes. Any motion of the jaw, such as produced by talking or eating, was sufficient to provoke an attack. During the examination her face became greatly distorted and she appeared to suffer extremely from the effects of a paroxysm excited by talking. Neurologic examination failed to reveal anything of importance.

From December 5, 1908, until May 1, 1909, she improved somewhat under the administration of atropine sulphate; though the attacks continued to incapacitate her for work.

May 1, 1909, after a drop of 1 per cent. cocaine solution had been injected into the skin, 30 minims of 80 per cent. alcohol containing 1-5 per cent. cocaine was injected into the foramen ovale. No difficulty was experienced either while inserting the needle or in locating the foramen. During the last 1-8 inch of the insertion there was noticeable lessening of resistance and the patient started slightly from pain in the distribution of the inferior branch. While being injected the patient remained perfectly quiet and was not at all nervous. Afterwards she said that the operation had been perfectly painless except when the point of the needle entered the foramen ovale. Immediately after the injection there was noticed numbness, both of the skin and of the mucous membrane, of the lower left side of the face, but not any disturbance of sensation could be demonstrated objectively. Though she talked and executed chewing movements she was unable to cause any pain to appear such as these movements formerly had provoked.

Slight stiffness and a little pain were noticed in the region of the left temporo-maxillary articulation during the succeeding four days. However, there had not been any recurrence of the neuralgic pains. Numbness persisted, but examination of the tactile, pain, and temperature senses failed to reveal any perceptible difference between the injected side and the corresponding contralateral areas.

Subsequently she steadily improved, though occasionally slight transitory pain resulted from masticating or talking. This pain was referred to the second and third left upper

molar teeth; the only ones which had not been extracted from the left side of her mouth. October 29, 1909, six months after the injection had been made, she reported having been perfectly free from pain with the rare exception of a dull ache that appeared only when she talked much and which not only did not annoy her but which terminated when she ceased talking. An area of slight numbness, about the size of a quarter, persisted at the site of injection.

The result obtained in this patient undoubtedly may be considered a complete success.

Case 2.—A man, aet. 64, was well until four years ago when he began to have paroxysms of pain in the whole distribution of the inferior branch of the left trigeminal nerve. The pain was so severe that he had sacrificed in vain all the teeth in the left side of his mouth. The attacks were almost constant. Eating, talking and opening the mouth were sufficient to cause the pain to appear, or unbearably to intensify it if already present. At night the paroxysms were severe enough to cause him to lose much sleep. During the examination he had several attacks of what appeared to be severe pain; his face becoming greatly distorted.

July 23, 1909, the first injection was made. Though the point of the needle did not appear to be in the foramen ovale slight numbness was experienced immediately following the injection. July 31, 1909, the patient reported that the pains were just as severe but not so frequent. He could eat and talk, however, without causing an attack to appear. Numbness was noticeable only on the left side of the chin. Formerly a slight touch on the left side of the face was sufficient to cause an attack, but after the first injection pressure could be made with impunity.

As further improvement did not occur a second injection was made August 4, 1909. Because of the distinct lessening of resistance during the last 1-8 inch of insertion of the needle together with the appearance, at this time, of moderate pain referred to the distribution of the inferior branch the foramen ovale was thought successfully to have been reached by the point of the needle. That this was true further was indicated by the immobility of the point of the needle. Except for moderate pain when the needle was thrust home the operation was painless. After this injection decided numbness was noticed in the whole distribution of the inferior branch. While

drinking a glass of water, later in the afternoon, he had a severe paroxysm of pain which lasted about thirty seconds. Subsequently he experienced on several occasions slight twinges of pain but these were so mild that they caused no annoyance.

September 18, 1909, moderately severe pain commenced in the left inferior maxilla. This pain was distinctly localized about a point where the second bicuspid should have been. Three days later a third injection was made. The results obtained this time were more satisfactory, and on October 2, 1909, the patient asserted that he had not had any attacks and that numbness still persisted in the left side of the chin.

In this patient the beneficial effects of treatment, though eminently satisfactory, were not as perfect as those obtained in the first case. As he was perfectly satisfied with the almost complete freedom from pain which followed the last injection he was told to wait a few months and then, if necessary, another injection could be made. Neither of these patients experienced a disagreeable amount of pain during the injections. In fact, both averred that it was almost painless.

Case 3.—During two years Mrs. P. had suffered from severe pain 3-4 inch posterior and inferior to the left maxillary articulation and extending 2 inches down the ramus. The paroxysms occurred about every five minutes and lasted a minute or so. While talking or eating, however, the pain was constant and she was able to eat only soft foods. The three lower left molars had been extracted in vain attempts to cure the condition.

The first injection, made December 14, 1909, was devoid of any beneficial effects. Two weeks later a second injection was made and immediately afterwards the patient stated that she experienced numbness in the distribution of the nerve—the inferior branch. Subsequently the pains persisted but no longer were they organic in type as they shifted from place to place and apparently ceased to bother the patient when her attention was distracted. Moreover, the objective evidence of pain—the spasmodic facial distortion so familiar in *tic douloureux*—no longer was apparent, even when she complained bitterly of pain. It seemed, therefore, that these persistent fugitive pains were due only to the continuance, as manifestations of hysteria—to which undoubtedly she was subject—of pains which originally had been organic. Accordingly,

further treatment with the alcohol injections was abandoned and she was variously treated but with indifferent results.

Case 4.—In this patient, a physician, aet. 55 years, typical tic douloureux of the inferior branch commenced about three years ago. A little less than two years later the pains became unbearable so that a peripheral neurectomy was performed by Dr. W. B. VanLennep. Following the operation the patient was perfectly free from pain for about eleven months, and then the attacks returned with all their former severity. Having been treated for three months by Dr. Bartlett with aconitine in appreciable doses and as the disorder continued to increase in severity the patient was referred to me for the injection treatment.

Upon attempting to insert the needle the patient complained that while the needle itself caused little pain the pressure necessitated by the dense tissues was too great to be borne. Consequently it was necessary to resort to incomplete etherization. Considerable difficulty was experienced in inserting the needle but finally the alcohol was injected satisfactorily. The following day the patient was decidedly improved and four days later—September 13, 1910,—he reported, with much pleasure, that he had not had any pain for three days.

In a communication dated October 11, 1910, he states that he has not had the slightest pain and that he believes himself to be cured.

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NERVOUSNESS.

BY

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THE medical profession and the laity alike, apparently find nervousness one of the most satisfactory descriptive terms in their vocabulary. "Consumption" is equally familiar, but not nearly so popular as it means practically one thing, while nervousness can be and is applied to a variety of conditions whose name is legion, and whose manifestations would put to shame the most expert prestidigitator.

Nervousness, unless it approaches some very definite form such as chorea or hysteria, has hardly succeeded until recently—if indeed it has now—in being taken seriously. It has by no means always been taken seriously even in the exceptions noted. For instance, how often is it said of the child who, as a result of disturbed nutrition or of over-functioning of the nervous system, exhibits a certain nervous instability: "Oh, well, she will outgrow it!" Is it the parents or friends alone who dismiss the subject in this cursory way? Is it not sometimes the good family doctor, he who would so conscientiously rack his brains to adequately treat an acute bronchitis or a troublesome enteritis?

Yet upon reflection, nervousness reveals itself to us as the root of many evils both active and retroactive. This malady requires no exceptional advantages; the poorer the human soil, the more luxuriantly it flourishes. It thrives upon neglect, and is quite capable at its best, or rather at its worst, of suddenly surprising the inattentive or superficial observer, after some months or years, by bursting into the full flower of those "mild cases," to use the courtesy term, of mental disease which may require, notwithstanding their mildness, all the alert and skillful attention of the family physician or specialist, the resources of the specialist.

Such condensation of the thought to be conveyed, namely, that nervousness is not necessarily a slight and unimportant affection, but holds inherently many significant formidable possibilities, such condensation, I say, readily lends itself to

at least apparent exaggeration. This is not my intention. I merely wish to point out that nervousness is too often a progressive condition, one capable of almost indefinite expansion either in the individual, or through hereditary bequests.

Nervousness in general may perhaps be said to be only symptomatic and not a disease, but that term may undoubtedly be fairly applied to that particular departure from the normal whose great characteristic is a specific nervousness, and which we commonly speak of as neurasthenia.

Springing from a perhaps unidentified root of a generalized nervousness, either inherited or acquired, neurasthenia or nervous exhaustion impresses us as a disease somewhat hard to define. Savill's characterization seems to me one of the best. He gives it as follows: "I may say that I regard neurasthenia as an irritable weakness of the entire nervous system, characterized by hypersensitiveness of the tactile sensibility and special senses; by headache, inaptitude for mental work, disturbed sleep, and irritability of temper (when the brain is chiefly affected); by general weakness, restlessness, nervousness and vague pain (when the spinal cord is chiefly affected); and usually accompanied (in both forms) by various phenomena referable to the vaso-motor and sympathetic systems. These two forms, the cerebral and the spinal, are always more or less mixed, neither occurs alone, though generally one or the other predominates."

This is both a definition and a summary, in brief, of the distinctive symptomatology which, in detail, might be extended indefinitely.

In a previous paper on "Nervous Prostration," which I had the pleasure of submitting to this society, I made reference to the fact that the main features of this disease were recognized centuries ago; were discussed with accuracy and insight as early as the sixteenth century; were first assembled, as it were, into a coherent whole and appropriately christened by Beard of New York in 1868. To the latter it seemed, and he stated it with emphasis, that neurasthenia was caused primarily by over-civilization, with its disturbance of the balance between nerve waste and repair, resulting in a weakened and unstable nerve-force. As to the logical outcome of this weakened nerve-force, we got excessive irritability, direct and reflex, local and general. The brain, the digestive and the reproductive systems being the three chief centres of irritabil-

ity, supplied the most evident and unmistakable manifestations.

If Beard could attribute nervous prostration chiefly to over-civilization in 1868, what importance may we not be entitled to lay upon this as a causative factor nearly half a century later? As we think of neurasthenia, we recognize that it is distinctively and distinctly an exogenous disease. The body does not evolve it. That which it does furnish through faulty inheritance and defective metabolism, is the sub-normal resistive power—the weakened physique, the weakened will, incapable unassisted of repelling the assaults of those bacteria of over-civilization which elude the microscopist and the elaborator of serums; the sub-normal resistive power incapable of sustaining undamaged sudden stresses and strains, and when damaged incapable of self-repair.

It is true that it is not the individual handicapped by the heredity of an unstable nervous system, whether derived from alcoholic, syphilitic, insane, or neurotic forebears, who is the only sufferer from neurasthenia. Many organic diseases not necessarily of the nervous system, but generally indicative of disturbed metabolism, such as cancer, rheumatism, and especially gout, furnish their quota of neurasthenics. Cancer is increasing by leaps and bounds in this and other civilized countries. The death-rate alone, showed an increase in the registration area of the United States of 20 per cent. in the ten years from 1890 to 1900. Diseases of the kidneys and the digestive system are markedly on the increase, as well as those of the heart and blood-vessels. "The natural conclusion is," says the president of a great life insurance company, "that this abnormal increase in the death-rate from the early wearing out of these vital organs is due to excesses in eating, drinking, working, playing—in short intemperate living, and the strenuous life." What is this but the extension of the artificialities, of the electric light mode of existence, the product of that over-civilization which Beard so deprecated as undoubtedly the primary factor in the causation of such an enormous number of cases of neurasthenia?

Dr. William von Leube, in his extremely minute and painstaking work on "Medical Diagnosis," points out that "Neurasthenia occurs much more frequently in the male than in the female," that is, in the sex both determining and joining so unreservedly in "the pace that kills" or disables. After enum-

erating the well recognized causes with which we are all so familiar, especially that of heredity, and accentuating the part played by mental over-exertion and emotion, and life lived under high pressure and unfavorable conditions, he emphatically cautions the diagnostician against arriving at the hasty conclusion of a purely functional disease, and in these words: "It must be considered the first and most important rule never to make it (such a diagnosis) until all the organs have been carefully examined for an affection which is characterized by anatomical changes and precise clinical symptoms, i. e., to diagnosticate neurasthenia only when no organic disease accounting for the nervous symptoms can be demonstrated." Dr. Leube points out that, otherwise, we may confuse neurasthenia pure and simple, with tabes, incipient severe cerebral affections, non-nervous gastric and intestinal diseases, with angina pectoris caused by atheroma, aneurysm or adipose heart, with slight uremic symptoms, etc.

This is so far true, as regards those symptoms of the above-mentioned diseases, simulating neurasthenia as heretofore understood. It is, or so we may predicate, so far untrue, as is indicated by the statement of Dr. Stewart, of Edinburgh, in 1908, about seven years later than Dr. Leube's, that "Disease is inconceivable without some underlying physical basis. The lesion need not be visible microscopically, it may be molecular or bio-chemical." Or, as it was said only a year ago before the Homœopathic State Society of Maryland, in the course of an address "Neurasthenia—Psychasthenia," "In the light of modern research into abnormal conditions of health, it is doubtful if the word functional will long remain to cover so many physical conditions as it has in the past."

Nervousness, either well advanced toward a definite neurasthenia, or as an established neurasthenia with its conspicuous earmarks of multiplied nervous symptoms, will seemingly before long, take its place as a disease accepted as involving tissue changes—whether identified or not—and only so far entitled to the old definition "functional," as that term may be indicative of a departure from the normal, which, in the great majority of cases, has not gone beyond recuperation, but will yield to surroundings, influences, and treatment appropriate to a cure.

This is the more thoughtful and progressive attitude of to-day, the attitude of the scientist who, with highly trained pow-

ers of observation and perfected appliances, delves deep into the mysteries of living tissue, until he is able confidently to refer back the symptoms not merely to heredity, to environment, to occupation, etc., but to degenerative changes in cell, tissue, organ, system, or to the demonstrated presence of toxins, to measured and recorded inhibition or perversion of nutritional processes, so that he is, or we believe soon will be able to say, such and such are the demonstrable reasons why we have a perverted, unresponsive and obstructive nervous mechanism.

The close relation between organic diseases already familiar to us, and the legion of symptoms collectively termed nervousness, will gain in emphasis, and far fewer mistakes will be made along the lines of differential diagnosis. The general practitioner will also increasingly realize that, as organic and demonstrated lesions may present symptoms simulating neurasthenia, so neurasthenic symptoms may be but the forerunners of more serious pathologic states.

"Great oaks from little acorns grow." It is this fact, literally in a nutshell, so obvious also as to be often forgotten, that has impelled me to give so simple a title to this paper. We perceive and doubtless for some time have been aware of this trend of modern investigation just outlined, which has ceased to be content with the hackneyed enumeration of familiar symptoms, a mere recount of the leaves on the tree, but rather turns to the bigness of the tree itself, the many associated conditions medical and social branching from its trunk, the necessity for a clear conception of the relation of all the parts to the root, in order to intelligently and logically work out the resulting problems of treatment, the pressing problems of prevention, palliation and cure.

It is impossible to discuss the question of treatment and radically depart from accepted methods. Yet each one approaches them from a somewhat different viewpoint. It is, to generalize, perhaps less a question of discarding the old methods, than of applying more wisely and extensively the resources we already have, or of making necessary modifications, or of showing a receptivity to new ideas, a willingness to dispassionately test any new methods suggested, given cases to which such methods may fairly seem applicable.

Upon the prevention of this condition I shall touch but lightly and incidentally. "Immunity from neurasthenia means

freedom from exciting causes. These include every condition that uses up nerve force and nerve vitality faster than they can be regained." It is hardly possible to express this thought more concisely. No one can be said to be beyond the possibility or liability of developing neurasthenia, since no one can be said to be exempt from the danger of the common causative factors, as well as acute diseases, or sudden shocks to the nervous system, emotional or traumatic.

As good citizens and as specially qualified teachers, we may add our mite to the prevention of these cases. It is our efforts directed toward palliation and cure, however, that will chiefly give us tangible results.

No one can approach a discussion of the treatment of neurasthenia without a word on the rest cure; and it may be said, without hesitation, that the limiting of the application of the unmodified rest cure, is one of the strongest tendencies of the day in the treatment of neurasthenia. There is a mighty reaction, not so much from the Weir Mitchell rest cure as it was intended to be applied, as from the extravagancies into which the followers of Dr. Mitchell so signally fell. Of their interpretation of the rest cure one specialist has said: "It is almost enough to kill a man without being sick." Weir Mitchell should never be made responsible for this sort of thing. His rest prescriptions were written with brains as well as ink. His lectures delivered at the Infirmary for Nervous Diseases of the Orthopedic Hospital in Philadelphia even as early as 1875, bear witness to this. He would fit the treatment to the individual case.

If one must generalize on the rest cure, then it must be to admit in his own words the following: "Think, then, when you put a person to bed you are lessening the heart beats some twenty a minute, nearly a third; that you are making the tardy blood to linger in the by-ways of the blood-round; that rest prone, binds the bowels, and tends to destroy the desire to eat; and that muscles in rest too long get to be unhealthy and shrunken in substance. . . . Rest (as a means of treatment) can be made to help. Rest also can hurt, and he who deals with it as a means of cure must not fail to bear in mind the modes by which we can secure the light without the shadow, the good without the harm."

What could be more reasonable than this, particularly if we recall the adjuvants and auxiliary aids which Mitchell availed

himself of even at this time, to offset any untoward results from enforced inactivity? While suppressing over excitation of nerve force and vitality, he added to the negative a very positive and effective line of treatment; full feeding, not by mouth only or by rectum only—"I like to use both ends at once," he said; electricity and massage; passive for active exercise; an entire change of surroundings and isolation if required; agreeable, cheerful companionship of specially educated and cultivated nurses to read to and amuse the patient; liberal diet and few drugs, much milk and cod-liver oil, "raw soup," as he called the now largely discredited expressed juice of beef, and malt, porter, etc., as indicated. Above all else a graduated system of isolation and rest, much or little, but judiciously varied to meet the requirements of the patient's temperament and condition.

This is what the experienced physician is doing to-day. He knows no hard and fast rules. He has the admitted advantage of familiarity with an almost countless number of cases. He has of necessity developed a sixth sense, which enables him to classify a patient as no rigid text-book rules of diagnosis—though these be the foundation of his earlier work—can ever classify with equal precision, for the printed word is incapable of taking sufficiently into account the personal equation. The same is true as to treatment, particularly the auxiliary. With regard to the latter, I would call your attention to the very interesting report made by Dr. Herbert J. Hall in the *Journal of the American Medical Association*, January 1, 1910, of his five years' experience in the institutional use of physical exercise as a remedy in, as he says "certain functional nervous diseases when unsuitable occupation has been the rule, when suitable occupation has been misused or when idleness, either from choice or necessity, has been the habit." The work cure, or occupation cure, was undertaken by him through the teaching of certain crafts, viz., hand-weaving, wood-carving, metal work and pottery; the system including: "A division of the twenty-four hours into changeable periods of work, rest and recreation, plenty of air, wholesome food, wise suggestions, and medical treatment (as indicated), together with a pretty complete detachment from all other obligations in life." The results were most satisfactory, and there is no doubt that this method of industrial treatment can be used to great advantage in selected cases of neurasthenia and

psychasthenia. It is a development and a most useful extension of the principle we have for some time been availing ourselves of in prescribing Swedish gymnastics, gardening, golf, tennis, rowing and sailing; but in a large proportion of cases, results will be more satisfactory and failures fewer, if we proceed in ordered sequence from a preliminary period of rest to new and well-chosen exercises.

Professor Osler, that intensely practical and logical writer, in commenting upon the so freely given advice that the neurasthenia patient have change of scene and activities, recommends preliminary treatment of a few weeks at least, in the form of rest. Physically the patient requires renovation of tissues, as mentally a renovation of viewpoints, and in both, radical changes in functioning.

Dana, of New York, emphasizes the benefits to be derived from a program progressing guardedly and intelligently from a state of "abnormal passivity" to "abnormal activity." Other measures approved by Dana in the last edition of his valuable and interested work on "Nervous Diseases and Psychiatry," are, in the order named, hydrotherapy, electrotherapy, and massage, and the invariable application of that mental treatment we conveniently call psychotherapy. We have been fairly flooded the last few years with literature on psychotherapy. The subject is of immense importance, and the skillful and tactful application of suggestion, of inestimable value to our patients as is well known. There is certainly no expert physician who does not, through suggestion, endeavor to obtain a right mental attitude on the part of the patient. The chief suggestion will naturally be first, that which aims at establishing the belief in the attainment of health, for, as Dubois says: "The nervous patient is on the path to recovery as soon as he has the conviction that he is going to be cured."

Hydrotherapy is a most reliable aid in lessening nerve tension and promoting normal metabolism. The cold sponge bath in the morning in selected cases, the luke-warm bath at night in practically all cases, the Charcot, the Scotch douche, the wet pack in connection with massage, especially for neurasthenic women, salt baths, foot baths, shower baths, etc., can hardly be too highly commended when intelligently prescribed.

Electricity is a valuable adjuvant. General faradism, galvanism, and static electricity have each a special value.

Nervous and neurasthenic cases not infrequently present de-

fects which may require attention. Thus errors of refraction and accommodation should be corrected. Pelvic disorders in women are so common we may almost say their entire absence is abnormal; it is certainly the exception. In men, prostatic irritation and irritable stricture, hemorrhoids and fissures may start up neurasthenic symptoms.

One of the leading medical journals published in Germany, asserted last September that flat foot plays a considerable part in the production of neurasthenia, and that "many discouraged neurasthenics can be restored to health and happiness" if this condition is remedied. It is claimed, with some show of reason, that the effort in flat foot to step with as little pain as possible, throws the thigh into adduction, which pulls on the tissues and drags on and irritates the nerves.

To diet we turn as both a considerable factor in the production of nervousness, and a valuable ally in curing it. Severe and long continued indigestion, especially if associated with gastropnoxis or enteropnoxis, is a by no means uncommon exciting and maintaining cause of neurasthenia. If children were properly and regularly fed with simple, nutritious food, and if additionally and incidentally, they spent more of their evenings in bed, we should have fewer neurasthenic men and women. "The candy and soda water habit of American children," says Dana, "impairs nutrition and brings on more trouble than many more apparently serious causes." In our schools and colleges for girls, this habit and that of incessant nibbling between meals has become so noticeable through the ill effects, that even the students themselves in college journals deprecate such indulgences.

Frequently not enough fat enters into the diet of the nervous patient. This can be supplied by including butter, cream, olive oil, and the fat of meat in the menu selected. Milk and eggs, fish, and a limited amount of meat, except for lithemic patients, fresh vegetables and fruit, all can be depended upon to feed the tissues and increase vitality. Food must be adapted to the patient both as to kind and frequency of administration, just as other remedial agencies are chosen for the individual case. Four or five glasses of water a day are often one of the necessities, for the highly nervous are rarely water-drinkers.

There is a very marked approach in the treatment of neurasthenia by drugs, in the methods of the two principal schools of

medicine. The best exponents of both unite in saying the fewer drugs the better. Our advantage comes less in the remedies we use, than in their selection and preparation. The former is in accordance with a definite principle, demonstrably scientific; the preparation may be varied as to potency according to the case.

The old school has iron, arsenic, phosphorus, strychnia, and the hypophosphites, and so have we. But we have in addition such valuable remedies as Zincum, with the characteristic indications of backache, burning down the spine, weakness, fornication, physical depression as well as cerebral exhaustion. Picric acid, with inability to use the mind without causing distressing headache; the brain fog of literary and business people; pain, when in the occiput, extending down the spine. Anacardium, with its defective memory, indigestion or gastralgia, liability to colds, inclination to keep quiet. Erythroxylon coca, when sexual excesses or the excessive use of tobacco, with or without overwork, have disordered the nervous system, as particularly evidenced by cardiac and respiratory disturbances. Gelsemium and Nux vomica, are both as efficient when indicated as are those great standbys already mentioned—Arsenicum, Phosphorus, and Strychnia. And Valeriana officinalis, in nervous gastric disturbances, the hysterical nervous temperament, excessive nervous excitability with neuralgia or sciatica, and not infrequently when other remedies have failed.

For sleeplessness, we are not confined to the bromides, chloral, and opium preparations, nor yet to the coal tar preparations. We have other resources of great value, such as Belladonna, Hyoscyamus, Stramonium, Ignatia, Cimicifuga, Coffea, Calcareo Carbonica, Aconite and others, including those already mentioned.

We know that all the above are valuable and serviceable; but as we can never confine ourselves in the treatment of diseases in general to the best selected drugs, least of all can we do so in the treatment of nervousness and nervous prostration. We must establish, at the earliest possible moment, conditions most favorable to their exhibition. Therefore, when these cases come under our care, we must forcibly detach them, if necessary, from wonted surroundings, the constant friction of accustomed routine, the irritation of well-meaning members of the family or uncongenial business associates. We

must effect, oftentimes a revolution in habits of life as in habits of thought.

If there are sexual irregularities or perversions, they must be corrected. The use of narcotics or stimulants must be met by the varied resources the physician has at his command.

I have tried to enumerate briefly the most recent scientific conception of the nature of neurasthenia, and approved methods of treatment. I will, however, add one final word on the fundamental principle of the latter, which life all about us logically suggests as the most urgent need.

While it is undoubtedly true, as Professor James, of Harvard, has said, that we have vast stores of mental energy in reserve upon which we often do not sufficiently draw, it is equally true that there is a limit to normal sustained activity; that these wells of vital force must be replenished from some source, and that after high pressure activity, mental or physical, especially if long continued, or after sudden stresses or strains, or deterioration of nerve force through wasting diseases or exhausting abuses, replenishment and renewal can only logically come initially from Rest. Rest, however elastic we may make the definition of the term, will prove the best foundation on which to build a superstructure of health of body and mind. We will also find that, to ensure it, the suggestive influences of new surroundings under favorable conditions, will prove as valuable allies as the new mental atmosphere and new physical regeneration which we endeavor to establish.

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BREAST TUMORS AND THEIR TREATMENT.

BY

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(Read before the Homœopathic Medical Society of Pennsylvania, September, 1910.)

MANY persons, women especially, having noticed nodules in the breast, fail to consult a physician, until the hitherto almost minute lump, has so developed, that it has become visible to the naked eye, and is causing some discomfort and possibly pain. The family physician being consulted will, perhaps, advise some local application and internal medication, without any result whatever. These tumorous masses go on increasing in size, oftentimes through irritation, or traumatism, developing from an originally benign state into a malignant condition, in which case the prognosis is generally unfavorable.

Tumors are divided, clinically, into two great groups, the simple or benign, and the malignant. A simple or benign tumor is one which, as a rule, grows steadily, or, having attained a certain size, remains stationary. It consists of tissue approximating closely in structure to some normal adult tissues, and is generally surrounded by a distinct capsule, out of which it can be completely shelled, for there is no infiltration of surrounding parts. After such removal it does not recur locally, and secondary growths in glands or more distant parts do not result from it. It interferes with health only mechanically, unless some accident, as inflammation, occurs in it. Tumors of the adult connective-tissue type generally pursue this course, and may reach a huge size.

A malignant growth, on the other hand, generally grows rapidly and tends to enlarge continually. It consists of tissue which is markedly atypical; is, as a rule, surrounded by no capsule, but progressively infiltrates the surrounding tissues;

after apparently complete removal, recurs, and, whether removal or not, secondary growths are common in the nearest lymphatic glands or in distant parts, or in both. Though the patient is often in excellent health at the appearance of the tumor, he sooner or later wastes, loses strength rapidly, and becomes very anemic, and cachexia is produced. This is due to many causes—to removal from normal tissues, of nutriment required—for the active growth of the tumor-cells; perhaps to the metabolism of the latter, pouring abnormal excreta into the blood; to pain and anxiety; often to profuse discharge and septic absorption consequent upon ulceration; occasionally to actual interference with the ingestion and absorption of food. The more rapidly and the more completely a tumor produces these results, the greater the malignancy. Even growths of the same class vary much in these respects, and different classes do so still more. Though in a high degree characteristic of cancers, the purely clinical term “malignant” must be distinguished from the pathological term “cancerous,” which implies a specific structure in the growth, to which it refers. Sarcomata are often quite as malignant as cancers. The rate of growth is of great diagnostic and prognostic significance. The more rapidly a tumor increases in size, the greater proportion of its cellular elements. Metastatic growths indicate the extremely malignant nature of a tumor. These are found early in carcinoma, for the lymph-glands in the vicinity may be involved before metastases in distant organs can be detected. Sarcomata may develop in the breast, although it is more uncommon than carcinomata. Carcinoma is very common in the female breast. The uterus and the stomach are the only organs affected more frequently. In women carcinoma of the breast stands second in frequency. The frequency of carcinoma of the breast is directly related to functional activity, because the mammary gland is intimately associated with the sexual apparatus. As a rule, enlargement of the lymph-glands does not take place until after the tumor has existed for twelve or eighteen months. The arm should be placed close to the chest for the purpose of examining the axilla, so as to relax the pectoral muscles. You should always examine along the lower margin of the pectoralis major, and high up in the axilla, and in the clavicular region. If the patient is suffering with pain in the arm, it is fair to presume that the glands are involved, because this symptom is produced

by pressure upon the brachial plexus. I wish to mention here that metastatic growths next in frequency to the breast are found in the liver.

In diagnosing breast tumors, the first question to decide is whether they are benign or malignant. The most important considerations are the age, the location of the growth and whether or not the growth is adherent.

Carcinoma is more common in women over forty years of age, though there are a number of cases occurring much younger. The period of greatest liability to cancer of the breast is about and after the menopause. Cancer though affecting all parts of the breast, is more often found in its axillary, than in its sternal half, and the upper outer quadrant is affected more frequently than the lower. That portion of the gland directly behind the areola is next in point of frequency to be involved.

Benign tumors, on the other hand, are more frequently found in the sternal region. The fact of greatest diagnostic importance in a tumor is the degree to which it is movable. A growth which is not adherent to the skin and is freely movable is not, as a rule, cancerous. If, on the other hand, a tumor has caused retraction of the nipple or dimpling of the skin, it is generally cancerous. About ten per cent. of the cases of cancer of the breast, in its early stage, cannot be recognized clinically; therefore, every growth from the breast should be examined microscopically.

Treatment.—There have been any number of suggestions offered for the cure of tumors and also cancerous tumors of the breast, such as local applications of all descriptions, and the X-ray. These are all futile, and the only treatment that has given the best results in this class of cases, is the thorough removal of the tumor, and excision of the adjacent structure. It is very important to operate a case of carcinoma of the breast early, even in cases that are clinically doubtful, and you should expose all tumors for the purpose of diagnosis, when carcinoma cannot be absolutely excluded. The surgeon should no more hesitate to make an exploratory incision to determine the nature of a tumor in the breast, than in the case of obscure abdominal tumors. Cysts of the breast are often malignant, and excision of the entire cyst wall, as well as the surrounding tissue, is necessary, to insure extirpation of the disease. The safest and best way is to remove the most suspicious part of

the growth, along with the surrounding structure—then cauterize the wound with the actual cautery. I believe the danger of distributing cancer cells, can be prevented only in this way. Operation upon the breast for cancer and cleaning out the axilla are not especially dangerous. The death rate is about five to seven per cent. Cancer of the breast never gets well of itself, and the value of other methods of treatment is extremely doubtful. A permanent cure can only follow operative interference. There have been several operations devised for the removal of breast tumors by different surgeons. These all depend upon the character of the tumor—whether it is benign, multiple or cancerous. If a tumor is benign and freely movable, we lift up the breast, and at its attachment to the chest wall, make an incision, and by dissection, remove the tumorous mass. Then by sutures, close the incision, thus restoring the contour of the breast. If there are benign multiple tumors, then the complete removal of the breast, or the commonly called elliptical or dinner plate operation is preferable. As to the removal of cancerous tumors of the breast, we have several operations, namely: The Warren, by Dr. Warren, of Boston University, Halsted, Rodman and Mayo, the last mentioned are simply modifications of the Warren. The choice of operation depends largely upon the size of the tumor, the amount of lymphatic involvement, amount of breast tissue and the elasticity of the skin. Where there is decided lymphatic involvement of the axillary glands, the Warren operation is preferable. This consists, after thoroughly cleansing the breast and surrounding tissues as in other operations, of making an incision about four inches long from the coracoid process of the humerus along the inner border of the biceps muscle, through skin and superficial fasciae, turning down a flap, and by careful dissection, cleaning out all the axillary glands, being careful not to injure the blood vessels and nerves in the axilla. Continuing your incision from the coracoid process, make an elliptical incision going through the pectoralis major and minor muscles, close to the clavicle and down to the ribs, completely removing the entire breast, dissecting from above downward—being careful not to manipulate the glands or tumorous mass any more than necessary, as often the cancerous juices from the glands and tumor infect other surfaces and set up new foci of development. After complete hemostasis, bring the arm to the side of the chest, and approximate

the edges of the wound by suturing, making a stab wound in the axilla for the introduction of drainage. If the tissues will not offer enough elasticity, it will be necessary to make an incision through skin and fasciae, a little distance from the original wound or else the use of sliding flaps or later skin grafting. Some surgeons still make use of the elliptical incision or dinner plate operation and have had very good results, being able by retraction and dissection to remove a greater portion of the lymphatic glands from the axilla. Other operators claim that no incision should be made down the arm, as this may interfere with its use. These operators advise cutting obliquely through the pectoralis major and minor muscles, close to the clavicle, down to the rib, and then using the remaining portion or stump of muscles as a retractor, they are able to dissect out the axillary glands, as in the operation of Rodman and Mayo.

In closing this paper, I would say, the best treatment is the complete removal of all tumors of the breast, whether they be benign or malignant. Do not wait until the tumor has fully developed and there is lymphatic involvement, in which the prognosis is unfavorable, but operate at once—as soon as they are recognized, and diagnosed as tumors, by the physician.

THE PATHOGENETIC ACTION OF PHOSPHORUS, AND ITS RELATION TO THE THERAPEUTICS OF RICKETS.

BY

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(Read before the Homeopathic Medical Society of Pennsylvania, September 21, 1910, at Williamsport, Pa.)

PHOSPHORUS is one of our most thoroughly proven drugs as can be seen from the article upon this remedy in Allen's *Encyclopedia of Pure Materia Medica*, in which he quotes 232 authorities. Most of these names refer to provers and clinicians reporting provings and personal observations of cases of poisoning. Hahnemann, in his *Chronic Diseases*, tabulates a long series of symptoms, many of which are from personal

provings the balance being from fellow observers and from authors.

Few poisons offer better opportunity for toxicological study than does phosphorus because of its frequent employment in certain quarters for suicidal and other purposes. In Vienna, for instance, it is common to encounter fatal cases in women who have taken matches on the strength of a popular belief in its efficacy as an emenagogue. One of the most valuable contributions to the study of phosphorus, however, is its effect upon the nutritive process especially of the bones as demonstrated by animal experiments and to this phase of its action I desire to call special attention.

The toxicology of phosphorus is most interesting, especially on account of the late occurrence of symptoms when comparatively small doses have been taken. Thus, several days after the poison has been ingested and after all acute manifestations have subsided the vomiting returns and may become bloody; there is severe gastralgia; jaundice develops and the liver is noticeably enlarged; the pulse is weak and the urine, which at first is increased becomes scanty, sometimes bloody and eventually suppressed. Hemorrhages from the mucous membranes and under the skin supervene. Death results from cardiac paralysis or from exhaustion with convulsions and coma. (Cushny, *Pharmacology*).

The chief pathological condition to account for the above symptoms is fatty degeneration. This process can be demonstrated in the gastric and intestinal mucosa, in the renal epithelium, in the heart muscle and especially in the liver. Profound alteration in the blood occurs in patients that live for several days, the most notable change being delayed coagulability. The blood elements are destroyed. Small doses of phosphorus, however, exert an opposite effect, increasing the number of red cells in man.

In protracted cases of poisoning the pathologic changes above referred to are accompanied by pronounced proliferation of the interstitial connective tissue and typical cirrhotic changes in the liver and kidneys result. The therapeutic possibilities of phosphorus in the early stages of some of the more important chronic diseases is, therefore, clearly indicated from this resume of its pathogenesis.

The respiratory tract is not as uniformly and typically attacked in cases of acute poisoning as the tracts above referred

to but decided pathologic changes may be induced by chronic poisoning, especially in such individuals as are continuously exposed to its fumes. Necrosis of the jaw bone is a well-known form of chronic poisoning. There are, however, numerous instances on record in which some of the characteristic symptoms upon which we prescribe phosphorus in diseases of the respiratory tract were noted in cases of acute poisoning as can be seen from a perusal of the article in Allen's *Encyclopedia*. No doubt the pathological changes produced in the epithelial cells lining the respiratory tract are similar to those observed in the epithelium of the alimentary tract. When, therefore, the lungs are involved we will find first destruction and desquamation of alveolar and bronchial epithelium accompanied with fibrinous and bloody exudation and later interstitial changes in the alveolar and peribronchial structures. The relationship of phosphorus to profound pulmonary disturbances has not escaped the attention of the old school. Thus H. C. Wood (*Therapeutics, its Principles and Practice*), states that he "believes that he has once or twice seen it apparently act favorably in the acute nervous exhaustion of typhoid pneumonia," a condition to which phosphorus is exquisitely homœopathic.

The same learned author admits that the action of phosphorus in small doses is entirely different from that which it exerts in larger amounts. He states, "It appears to act when given in minute quantity as a stimulant to the nutrition of the tissues, into whose composition it enters." This is beautifully exemplified in the action of phosphorus upon the osseous system in therapeutic and in large doses.

When phosphorus is administered for a prolonged period of time to young growing animals in large doses changes are induced which closely resemble those of rickets. This fact was first observed by Kassowitz and led him to employ phosphorus as remedy for rickets. For this purpose, however, it must be administered in small, or therapeutic doses in order to obtain its "stimulating" effect upon bone nutrition through its specific action on the osteoblasts. A more convincing example of the homœopathic action of a drug cannot be readily adduced.

Beside the specific effect upon bone formation phosphorus also influences the absorption and deposit of lime salts in the tissues and in this manner brings about curative results in

other conditions, as well as in rickets. This leads us to consider the value of phosphorus in the spasmophilic diathesis, a condition intimately associated with disturbed calcium metabolism. The chief clinical manifestations of this diathesis are laryngismus stridulus (spasm of the glottis) and tetany. I shall not enter into a discussion of the various theories concerning the etiology of spasmophilia for the fact which chiefly concerns us is the deficiency of calcium in the tissues and the improvement resulting from increased calcium absorption in these cases. The efficacy of phosphorus in this condition was recognized long since both by homœopathic and old school practitioners; Baginski, for instance, (*Lehrbuch*, 1899) expresses himself as having frequently observed brilliant results from phosphorus in laryngismus stridulus although he admits that it failed him at times. Finkelstein later pointed out that when phosphorus was given in conjunction with cod-liver oil its action was practically specific, and he demonstrated that the beneficial results were due to an increased absorption and deposit of calcium in the tissues. Recently Rosenstern, one of Finkelstein's assistants, (*Berlin. Klin. Wochenschr.* No. 18, 1910), confirmed the specific effect of phosphorus administered in cod-liver oil in cases of both active and latent tetany, the abnormal electrical reactions observed in those infants returning to normal at the end of from two to three weeks of treatment. Improvement was also observed when cod-liver oil was administered alone, but did not set in until after five or six weeks, and the oil had to be administered in larger doses than when given in conjunction with phosphorus.

**PRESIDENTIAL ADDRESS DELIVERED BEFORE THE HOMŒOPATHIC
MEDICAL SOCIETY OF THE COUNTY OF PHILADELPHIA.**

BY

THEODORE J. GRAMM, M. D., PHILADELPHIA, PA.

ON assuming the duties of the office of president to which you have elected me, I desire to express appreciation of the honor of being for a time your executive officer. This honor has come to me entirely unsought, but with it is associated the serious responsibility of guiding the affairs of a society about

which so much of the history of our distinctive school centers, and which is capable of wielding such a wide influence, not only broadly humanitarian, but also for the development of that legacy of medical scientific truth which our forefathers have left us, and therefore I may rightly expect your active co-operation. That it is impossible to materially advance the interests of a great cause, even by the herculean efforts of one man without the support of faithful and devoted associates who with him have had a glimpse of the vision of greater things, is the verdict of history. Will you permit me to say frankly that in accepting this office, I come without any personal interests to serve and with no personal ambitions to foster; ready only to contribute to the general welfare of that which this Society represents and to do a man's part toward the attainment of those exalted possibilities which rightly belong to this Society. If, with me, you recognize these possibilities; if you will accept the responsibilities resting upon this Society; if you will co-operate with me in the attainment of the ends suggested, the coming year cannot fail to witness a satisfactory advance in that for which this Society stands, namely, to organize the Homœopathic Medical Profession of the County of Philadelphia and to advance Medical Sciences.

As homœopathic physicians we find ourselves in a peculiar situation. For more than a hundred years men of the finest intellects that have seen the light of day have labored with heroic devotion, at an expense of great self-sacrifice for the development and dissemination of a therapeutic truth, known for centuries, 'tis true, but unappreciated, which the master-mind of Hahnemann apprehended. That they displayed altruism of the noblest sort is the only just and adequate characterization of those sacrifices which the pioneers of the homœopathic school made during the long years that have passed. It would have been so much easier for them to have gone along with the crowd, to have floated with the tide, to have allayed an awakened conscience or hesitating doubt with the thought that the voice of the people is the voice of God, that the majority is right; but to the sincere and upright man upon whose consciousness the light of a great truth has once fallen, this is impossible! They must have been men of this type to have submitted to the painful experiences and distressing discouragements which the former years made coincident with an adherence to the distinctive tenets of our school. But they labored on with

everything against them, save only this, that clinical evidence confirmed their view. To the demands for so-called scientific proof they could make no response. The laboratory and chemical analysis were barren of fruitful results; there remained only analogy, the conviction born of inductive reasoning and clinical evidence. And yet we have come to recognize that clinical evidence embodies the supreme test! We may therefore say, that the science of homœopathic medicine has been builded in the same manner as every other science dealing with Nature, namely by the collection and orderly arrangement of observed facts. Thus it has come about that based upon the faithful labors of our forefathers, handicapped by impediments of every sort, the principles and practice of Homœopathy have reached a development whose influence is world-wide, and have become a force to be reckoned with; the evidence whereof is widely displayed in its institutions, in our clientele, and in that unseen force which leaves its imprint upon medical thought everywhere. Moreover, a reply to the cavilling demand for scientific proof is at hand. Those of us who know something of the results of recent scientific research are aware that we are on the eve of having, if we have not already had, the laboratory proofs and explanation of why homœopathic remedies act; that they do act was known a thousand years ago. The astonishing facts relating to the divisibility of matter and its potent power in attenuated form are almost a jaded tale, and it is hardly worth while to more than refer to that which is wellnigh an elementary fact of physics and physiological chemistry. Of course, the plodding prescriber of attenuated drugs has known somewhat of these subjects for some time and he is not exactly swept clean off his feet by the revelation; but some gentlemen may possibly feel a bit better now that certain physiological chemists, working in the great laboratories, have told us just how many ciphers to place in the denominator of the fraction of a grain of drug matter in a solution which is still capable of vivid demonstration by chemical means. I wonder whether we have in mind with sufficient clearness the fact that no recent discoveries in related science do else than confirm the clinical evidence of a hundred years ago. This is our legacy; and our duty is to further develop a system of medical practice which has already been beneficent beyond computation, and is daily receiving confirmation not only by the rational interpretation of experience in therapeutic prac-

tice, but also by many recent discoveries entirely aside from clinical observation. How we shall best discharge these duties is our *raison d'être*.

I might speak to you of the medical history which centers about this particular County of our State and around the medical school here located, now the oldest Homœopathic medical institution of its kind in the world. I might speak to you of the men whose faces the artist's brush has portrayed upon the canvases that grace these halls, whose memory is a treasure; and of those others not here depicted, the recollection of whom is at once a benison and an inspiration, and who may justly be numbered among the benefactors of mankind. They have all labored according to the light that was in them, have generously given their contribution to the cause of humanity in that they have confirmed and disseminated the knowledge and experience of that mild Might which is great! My friends, what a great inheritance is contained in our traditions, in the memories of the past, in the inspiring impulses for the future! Such, then, is the situation in which we find ourselves as adherents of the Homœopathic school of medicine. But to realize this situation even in some measure brings with it considerations of responsibility that the world has ever recognized as most noble in manly men, namely, to be true to our traditions, to maintain intact our inheritance, and to transmit it, enhanced in value, to a future generation.

It may be assumed that we all have an interest in our County Society. When, however, the condition of the Society is regarded from the point of view of a newly elected presiding officer, affairs assume a different aspect. I desire to submit that this Society has not yet grasped the exalted possibilities of its mission, neither with respect to the supervision and guidance of medical education, the advancement of our distinctive medical convictions, nor regarding the personal advantages of its members.

The foremost and most urgent requirement at present is that the matter relating to membership shall receive rational and tactful consideration. A committee will report on this subject, and I invite your thoughtful disposal of it.

Whether or not the anomalous conditions relating to the status of a large number of our members, has influenced the attendance and interest in this Society, it would be futile to discuss. One fact, however, must be patent to everyone at all

conversant with the situation, namely, that in this city there are many, some think too many, small medical clubs composed of gentlemen who hold membership in a number of these social organizations. It must surely be obvious that when the interest and time of our physicians are so completely taken up by these unaffiliated clubs, there is not the time and there cannot be the interest devoted to a central incorporated organization like this Society, to which primarily allegiance is due. We will be judged not by the success of our numerous social clubs, but by the success of our incorporated, representative Society. This is all so self-evident that I hesitate to enlarge upon it further than to say, it seems most desirable that representatives should be appointed by the several clubs, who in conjunction with a committee from this Society, shall take up the whole matter and correct this anomalous state of affairs.

There is a matter, frequently commented upon in private but which has not been often voiced publicly, and I venture to refer to it because on numerous occasions the evidence of its vital importance has appeared. I refer to the fact that members of this Society who hold positions of trust, either in a didactic or clinical capacity, in the several institutions under the control of the Homœopathic school in this city, are sometimes notable by their absence from these meetings. It is, of course, not pleasant to make comparisons, but if any of you have not attended some of the meetings of other medical organizations in this city and elsewhere, a great surprise awaits you, for there the conditions are entirely reversed. I do not desire to enlarge upon this subject further than to reiterate the comment that the incumbents of positions of trust in our institutions do not seem to be aware how much their positions depend upon the co-operation of the profession at large, and that, moreover, by reason of their positions they owe a debt to the general profession which is dischargeable in some measure by a positive and active participation in the affairs of interest to this organization which is distinctively the society of the general profession. When the time comes that this Society wields the power it possesses in this respect, it might possibly demand that this debt shall be discharged. In all justice also, the men in general practice have the right to look for clinical reports and the publication of the results of treatment from the institutions to which they give their moral, professional and financial support. It is most desirable that men engaged in such a noble calling as is

the practice of medicine, should be more mindful of the welfare of their fellows, and those occupying positions of trust should realize just by virtue of holding that position, the debt they owe to others, anyone of whom might perhaps as well fill these positions were circumstances rearranged in a few trifling particulars. Were such the case in our medical affairs the success of this Society would be assured and its mission well on the way toward fulfilment.

But considerations of this high order affect not alone external conditions. Our standing committees each have splendid opportunities for advancing the general welfare. Have you ever noticed how important are the duties of that on Organization, Medical Education and Statistics? Let me read from the by-laws where is decreed that this committee shall take into consideration the status of the Society as compared with others, shall compare the educational requirements and status of State medical examining boards of other States with that of Pennsylvania, and shall compile statistics demonstrating the superiority of homœopathic therapeutics. And yet these do not comprise the whole duties of this committee. As a former president has pointed out, this committee should report to our Society what the hospitals are doing and what they should do; what measure of success the training schools for nurses meet with, and what should be done to secure the best trained corps of nurses in the world; what support is given the college faculty in their efforts to increase the efficiency of instruction, etc.

It lies quite within the domain of this committee's work to examine how far the dispensaries of this city in the course of their increased activities, entirely legitimate for purposes of instruction, are overstepping their bounds and are injuring the early opportunities of the recent graduates in medicine. From information dating back many years to the time of my father's practice of medicine, and long before the dispensary evil had obtained present proportions, I know that there have been in this city very few instances of real distress from lack of medical attention, for physicians have been and are now ready to treat the needy not only without charge but also to furnish the required medicines without cost. When, therefore, we regard the dispensary evil in so many of its disagreeable features, all parading under the guise of sweet charity, one is ready to believe that charity verily covers a multitude of sins. I make free

to refer thus frankly to this matter because the time has long since passed when these conditions affect me personally to any serious extent; but what of the recent graduate? Many of the cases going to the free dispensaries should find their way to the office of the young physician who has settled near the homes of these patients, and he should thus have an opportunity of establishing a local reputation and the beginning of a living income much earlier than under present conditions. It should not be that these so-called charity patients should find their way, via the dispensary, to the offices of physicians who have obtained appointments there. We hear much of loyalty to our Alma Mater and to the County Society. But what is loyalty? Can it be that loyalty involves no reciprocal obligations? Are the obligations of our Alma Mater and of the County Society at an end when the student graduates? I am quite convinced that if we would obtain the loyalty of the young physician to the college and to the County Society, there is no surer way than by grappling with this serious abuse and making a rational and equitable disposal of it. The young physician, at a time when he is making his first struggle for professional existence, should not so soon encounter obstacles due to the pernicious activity of his Alma Mater nor feel the blight of indifference on the part of the representative Society composed of his more influential confreres. These views have often been expressed by the younger men, and there is much truth to warrant them. This Society, through its committees, can change all such distressing conditions just as soon as it really chooses to do so.

It is quite possible, though I hope unnecessary, to point out how the duties of the other standing committees will appear in a different light when illumined by the impulses flowing from higher standards of obligation and duty. Permit me to speak most earnestly about the neglected subject of a library. It may well be the height of anyone's ambition to devise a plan and secure its attainment whereby a library could be established which, in some measure, would represent the accomplishments of the past and furnish the basis for future advances. Little need be said of any subject that makes such a powerful appeal to intelligent and progressive men. Very little seems to have been done for some years in regard to this important project. I am sure it is the earnest hope of everyone at all alive to the duties imposed by the historic Past and by the possibilities of the Future, that this matter be now taken up with

seriousness and handled intelligently and effectively. I would urge the Library Committee to go earnestly to work and examine, in conjunction with the College authorities, the actual status as regards ownership and other matters relating to the library in this building, and then formulate a plan whereby the continuous growth and availability of the library will be assured.

Our Society should crystalize its influence as an organized body for the protection of the individual physician. Of course, our Committee on Aged and Indigent Physicians in a measure does this. And yet, while the occasion has not often arisen, and especially not recently, yet it is conceivable that any of our members may become the prey of the unscrupulous in suits at law growing out of the serious responsibilities of medical practice. A man should not be compelled to fight such a battle alone, but should have aid of every sort from his associates who know him best. Besides, when an attorney has been regularly employed to defend such cases affecting members of a society, it has been found that a deterrent effect is exerted. Other societies have successfully followed this plan, and it is worth while at least to inquire into the subject. Other means of advancing the personal interests of our members are readily discoverable if you catch the spirit in which this suggestion is made.

You have doubtless observed that most of the suggestions here made have dealt mainly with this Society *per se*, and with the welfare of its individual members. These remarks have not been confined to such subjects because others make no appeal, but because this Society must be placed upon a better footing, and our internal affairs must be properly arranged, before we are able to effectively discharge those larger duties which we owe to the public in general. It may possibly be that the reason is here suggested why we are not more often found participating in public health affairs, for example.

In concluding, I desire to bespeak your earnest co-operation in continuing the successful policies of my distinguished predecessor in this office and of our most efficient Board of Trustees, and in inaugurating such newer activities as may from time to time be deemed advisable, so that we also may participate in the general forward movement of all things worth while everywhere seen, and advance the beneficent influences of our distinctive medical convictions, and also in some measure our own interests as physicians.

**RECENT CONCLUSIONS ON EPITHELIOMA WITH A DEMONSTRATION
OF THE SUCCESSFUL TREATMENT THEREOF WITH
SOLIDIFIED CARBON-DIOXIDE.**

BY

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General Hospital and Dispensary; Dermatologist to the Hahnemann
Hospital Dispensary, Phila.; Dermatologist to the House of
Detention for Juveniles, Phila.; Medical and Physical
Director of the same; Clinical Instructor in
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lege, Phila.; Member of the Phila.
Academy of Medicine, Etc.

(Read before the Pennsylvania Homœopathic State Medical Society at Williams-
port, Pa., on September 21st, 1910.)

BUT ten years have elapsed since investigators began their renewed activities in finding the true cause of epithelioma and the search for a possible cure. While we are still in the very beginning of our work, it is hardly yet possible to state that we have at all reached definite conclusions which would warrant our making specific statements as to the true cause of epithelioma.

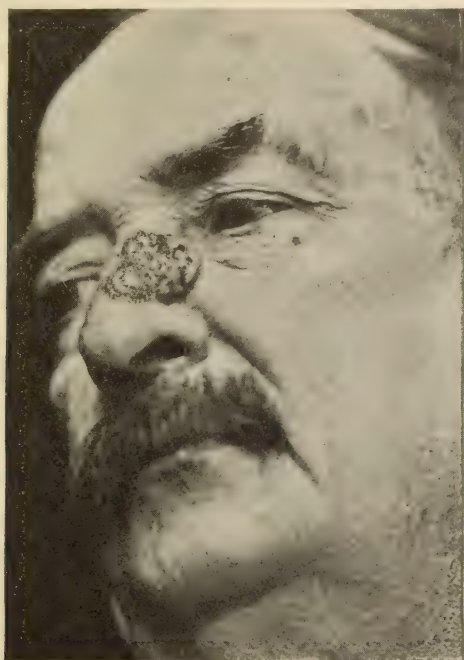
I am led to believe, however, from clinical experience during the past three years in the treatment of epithelioma, that we have at last reached a positive and definite cure for epithelioma whether it be of the superficial or deep type.

With the present campaign of public education which is going on, and the vast amount of clinical research which is being conducted, there is no doubt but that there will be a triumphant ending in the discovery of the true cause of cancer. While there have been many theories advanced from time to time, it is not my intention to enter into controversial opinions, but shall limit myself to a resumé of a few of the more recent conclusions as reached by those who have had experience in the investigation and treatment of epitheliomas.

Chester's noted surgeon, Dr. Daniel P. Maddux, of our own school, has from time to time reported his conclusions regarding the relationship between cancer and erysipelas infection. J. Bulognino, in the *Zeitschrift F. Krebsforschung*, Vol. IV, No. II, gives a review of the cases on record of erysipelas having exerted a favorable influence on cancer, and reports two of his own cases personally observed, both having shown exceptional malignant growth, but since attacks of erysipelas there

have been absolutely no signs of recurrence during the twenty and thirteen months which have elapsed. He further cites twenty-two authors who have reported an unmistakable favorable influence on cancer from erysipelatous infection, which certainly coincides more than favorably with the reports as given by Dr. Maddux.

Allen contends that the brown pigmented spots which are the sequellae of sun-burn bear a close relationship to epitheli-



1. Ulcerating Epithelioma of one year's duration. Had been treated with various topical applications without improvement. Referred by Dr. J. G. Langton.

oma, and he further contends that "the relatively great frequency of epithelioma upon the face may be well attributed, at least in part, to the irritating agency of chemical rays." Hyde, in an article on the influence of light in the production of skin cancer, practically takes the same view as Allen, and seems to think that the cells of the skin are stimulated by the inconceivably rapid velocity of the atinic rays. "Relative freedom of colored races, the absolute absence of cancer in Tunis, and rarity in Algiers, finds a natural explanation of the protection

furnished by colored skins," so contends Woodruff, to be found in his writings on the injurious effects of excessive sunlight. Hyde further concludes that the skin of the human body in certain individuals is unusually sensitive to the action of the atinic rays of the spectrum, resulting in the production of numerous conditions of which epithelioma is one.

The occurrence of epitheliomata following X-ray burns was prophesied before their occurrence really took place. There is no doubt but that there is a close relationship existing between the senile pre-cancerous keratoses and those following chronic X-ray dermatitis.

It is possible that the senile skin, filled with numerous keratoses and senile scum and teleangiectases, which are often the fore-runners of epithelioma, is the result of the irritating effects of the atinic rays of light having acted over a long period of time. In pigmentations and keratoses and epitheliomas the results are no doubt alike, the one being the result of light as an irritating agent, and in the others the X-rays with their more powerful atinic properties extending over a shorter duration of time.

This merely demonstrates the conclusion that atinic irritation is again merely one of the long-continued sorts of irritation which we now presume to be one of the important factors in the production of epithelioma.

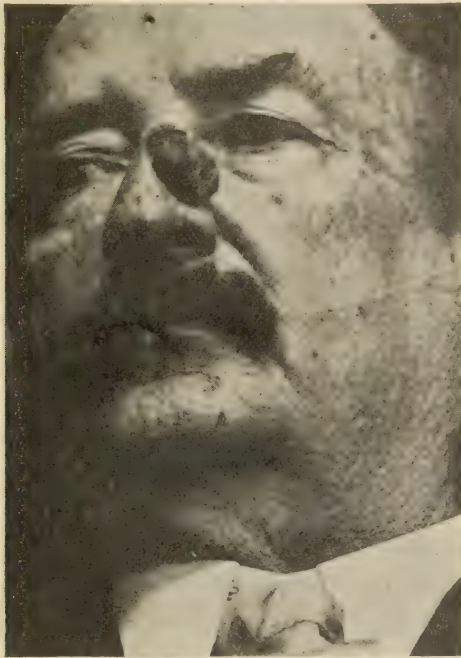
At a recent meeting of the Royal Society of Medicine, of London, it was announced that "clinical workers with radium may ultimately find that instead of curing cancer that they may as well succeed in producing cancer."

It is my belief that every mole, wart or angioma should be considered a potential cancer, especially where there is an inherent propensity for malignancy. Whether this statement can be accepted in its entirety or not matters little, as long as the physician will take it upon himself to see that such growths are removed in their earliest incipency, for then will it be possible to prevent cancer in its true picture.

It hardly seems probable to me that we should still consider cancer as a constitutional disease. We can most certainly deny the fact that cancer is really transmitted by inheritance. We can say, however, that certain families do inherit a type of cell structure which has less resistance to the possible implantation of a cancer germ; because I believe thoroughly that the parasitic theory of cancer will be affirmed in time.

While histologically there is shown an excessive reproduction of cells which destroy surrounding tissues and structures, and put in their place their own progeny, it can be explained on the hypothesis that a cancer develops and reproduces itself because of the stimulation of such cells by the presence of infecting germs, causing a change in character of the cells from their normal condition into that of the characteristic cancer cell.

That is, the entrance of a cancer germ upon a site which has been undergoing a slow process of irritation or stimulation,



2. Same Case. Showing typical scabbing two weeks after freezing.

which having been enacted during a great number of years, and even, it has been clinically reported, upon the site of a single injury or irritation, showing that it seems necessary to have a lowered existing vitality or some existing abnormal condition of the skin itself.

Gaylord, of Buffalo, and Plimmer, of England, are thorough in their convictions that they have a protozoon that produces cancer; while Sanfelice, of Italy, contends that a mycetic fungus is responsible for cancer growths.

The question as to how the parasite enters into the body has been discussed by Parke who, according to Knelliott, mentions twenty-eight cases of husbands having received cancers from their wives.

In cancer of the lip, mouth, etc., it is possible that the germ may have its entrance through the normal bodily openings. Constant irritation from cigar and pipe smoking, decayed teeth, etc., may be the niches for the entrance of the parasitic germ.

It has been pointed out that certain houses have possibly contained the infecting germ because of the presence of cancer in those who have resided in these houses for successive years. It has as well been demonstrated that infection of cancer may have been due to germ life because of the fact of epidemics occurring among smaller animals confined in cages, of which very interesting accounts are given by Loeb, Michaelas, Borrel, Gaylord and Cowells.

True it is that a great deal of work has been done trying to find a curative serum, and we as homœopathists for the past one hundred years have been doing with our indicated remedy just exactly what the serum-pathists are now trying to do.

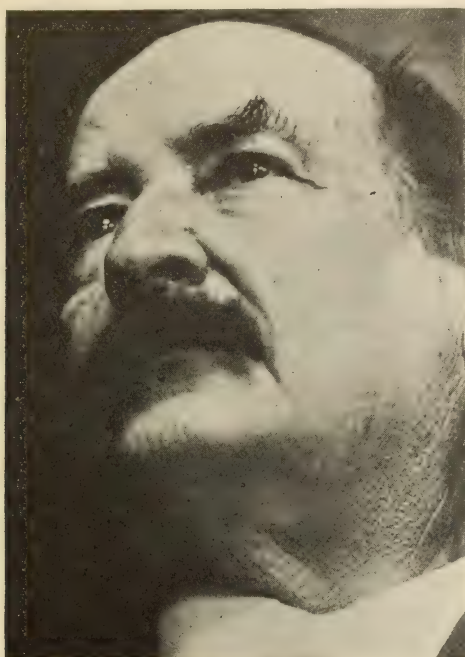
I have never yet treated a case of epithelioma by the method which I will shortly demonstrate in which I have failed to give the indicated homœopathic remedy,—not only during the time of treatment, but have continued to keep the patient upon that remedy, and shall continue to do so for a long time, because I do thoroughly believe that the indicated remedy increases the patient's opsonic index, increases the anti-bodies, if you please, increases the antagonistic serum, if you care to have it so, or it increases the antitoxin for the peculiar existing growth.

It does all of this, making the soil unfertile in that particular part and increasing its local resistance, so that it is better enabled to combat the abnormal increase of the cancer cells and the disease germs if they exist.

Any existing constantly inflamed area in the aged showing evidences of degenerative changes, or even without that evidence, should always be looked upon with suspicion as being cancerous. It certainly must be borne in mind that the clinical pictures of skin cancers certainly include a large number of types which are not generally recognized as belonging to any particular group, but are sometimes mistaken for the infective granulomata and other skin diseases.

The clinical pictures of epithelioma are usually sufficient to enable the expert to make a diagnosis on them alone; but the safest course to pursue in nearly all cases is to confirm that diagnosis by microscopic examination.

Caustics, cancer plasters, acids, and the like are absolutely to be interdicted in the treatment of this condition because of the fact that they do not thoroughly destroy the cancerous issue, or germ if it exists, and simply have a tendency to stimulate the deeper cancer cells to renewed growth and activity.



3. Same Case. After shedding of final scab. Showing slightly depressed, smooth, white area. Patient had three freezings extending over a period of three months. Internal medication, Thuja 6X.

Regarding the successful treatment of epithelioma, I shall limit myself absolutely to their treatment with solidified carbon-dioxide, giving the experience of numerous cases treated during the past three years in my own private as well as clinical practice, in which there have been no failures in the **hundreds** of cases treated, the percentage of cure still remaining one hundred.

Solidified carbon-dioxide offers a practically painless method of procedure, is comparatively short in its duration in comparison with other methods of treatment, the operator always having the action of this chemical agent at his minute control, being always able to regulate the depth of his freezing by the pressure exerted and the time consumed.

Solidified carbon-dioxide seems to have the happy faculty of permitting epithelium to regenerate so that scarring is usually absent. If any scarring is at all to be found, it is usually very superficial and pliable; the result being either a normal epithelial covering of flesh color or perhaps a slightly whitened area at the site of the previous lesion. This is not the rule when caustics or other agents of a destructive nature are used, marked, unsightly scarring usually the result.

That we have in solidified carbon-dioxide a most efficient agent for the treatment of epithelioma cannot at this time be denied, for the universal opinion of those who have investigated its use in that line of work seems to be unanimous—some having had but little experience in few cases, and others having had a greater experience. Freezing is an old therapeutic measure which has been tried in many ways.

Liquid air, having first been used by Drs. A. Campbell White and Tripler, does not seem to have been any more effective than carbon-dioxide in its freezing process; liquid air, however, requiring expensive armamentarium and is not easily obtainable, and is quite volatile, and therefore not easily usable.

It was Pusey, of Chicago, who first mentioned the possibilities of solidified carbon-dioxide as a substitute for liquid air. This was somewhat more than three years ago, and ever since that time carbon-dioxide has been investigated as a destructive agent for the cutaneous neoplasms and with marked success.

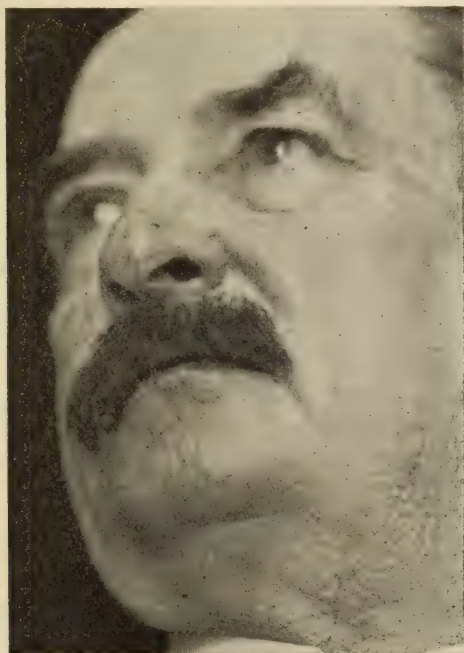
Solidified carbon-dioxide is about one-half as cold as liquid air, being about 90° Centigrade, while that of liquid air is about 180° Centigrade.

The thought had struck me that its temperature might still be lowered by mixing with ether or chloroform. I found, after repeated experiments, that such was the case,—the temperature being still further reduced some 60° or 70° Centigrade.

I find that Drs. Jackson and Hubbard, of New York, mention in a recent article on the subject that the Mayo brothers had found that mixing ether with solidified carbon-dioxide made it freeze more rapidly, and their results in this respect coincide with my own.

Carbon-dioxide is solidified because of the rapid evaporation of the gas through some porous material. For this purpose chamois skin is usually used, which is wound around the outlet of the tank in a way which I will shortly demonstrate.

Its action, of course, upon the cancerous tissue depends entirely on its ability to immediately freeze the part, producing, as it were, a dry form of gangrene which nature takes care of, and in a short space of time absorbs, causing the cancerous growth or any other neoplasm to entirely disappear.



4. Same Case. Showing gradual disappearance of scar with pinkish epithelial covering.

There are several appliances for carbon-dioxide, none of which, however, have appealed to me as being of any better advantage than using the chamois skin wound about the escape valve of the tank containing the carbon-dioxide.

It is usually advisable to protect the surrounding skin by chamois, cutting a hole in the chamois skin of sufficient size to fit the lesion, and then applying the snow immediately upon the lesion. It is well to protect the eyes by cotton, or when working near mucous membranes to protect them by several

layers of gauze in order to prevent the snow from freezing itself fast to the mucous membrane.

Solidified carbon-dioxide usually freezes well beyond the area to which the frozen mass is applied, so that one is usually always sure of being able to treat well beyond the affected parts.

Immediately upon applying solidified carbon-dioxide to the cancerous tissue it takes on an appearance of white ice quite similar to that of solidified carbon-dioxide itself.

Within a very short time after freezing a wheal-like eruption presents itself, characterized by a slight eruption or blebbing which soon forms into a crust, which usually happens within twenty-four hours. The crust usually remains for from ten days to three and sometimes four weeks; one crust which I recall upon a rodent ulcer remaining for six weeks, then falling off, leaving a smooth, white, scarless area.

Occasionally there may be a slight scarring which always seems, however, to have a tendency to gradually disappear. It can most certainly be said that the resulting scars, if any, left by the freezing process are usually pliable, and from a cosmetic standpoint are most certainly more beautiful than those left from any other agent used for a similar purpose.

Occasionally, when working about the orbit of the eye there is intense reaction following with marked swelling, usually closing the eye. This, however, has been perfectly harmless, and usually disappeared within the course of twenty-four hours, usually disappearing during the night.

If you should ask me if this routine of treatment is painful, I should state that my experience has varied from patients who have stated positively that they suffered no pain, simply a slight stinging or burning sensation, to that of other patients who stated that they suffered quite a little pain. I might further state here that I find all of those cases which have had previous X-ray treatment seem to be intensely painful, while those which have not had previous treatment of any kind whatsoever seem to suffer very little or no pain whatsoever. The rule, however, seems to be that the patient is unable to determine whether the sensation is that of one of extreme cold or heat.

I wish merely at this time to report a series of fourteen cases treated through the courtesy of Dr. Maddux at a weekly clinic conducted from June 1st to July 30th, 1910, held in his private operating rooms at Chester. This series of cases will suffice to give a general idea of the results to be obtained, and are similar

to the hundreds of other cases treated, as I might go on indefinitely reporting case after case with the same results—discharged cured.

I shall first report the case of Mrs. J. B., age 44, epithelioma of left cheek of three years' duration. Had previously been treated with caustic without avail. Patient was given two treatments of two minutes each with firm pressure, and was discharged cured.

Case No. 2.—Mrs. F. S., of Lenni, Pa., age 36. Epithelioma about the size of a small pea situated on the margin of the left lower eye-lid. Received two treatments of one minute's duration. Was in a rather awkward position to treat on account of close relationship to the cornea. Patient was discharged, however, cured after two treatments two weeks apart.

Case No. 3.—Mr. F. P., Chester, Pa., 63 years of age. Epithelioma on the dorsum of the right hand of four years' duration, two and one-half inches in diameter, photograph of which is shown to-day. Had resisted all sorts of treatment including the X-rays. Has so far received six treatments, freezing the entire area for two minutes. Treatments have been one week apart. Marked improvement has steadily shown itself and an ultimate cure is looked forward to. This case of the hundreds treated has so far been the most resistant to treatment, having a hard elevated border which seems almost impenetrable.

This case on its first appearance was associated with a most horrible, penetrating, foul-smelling odor which permeated the very atmosphere. The odor is almost indescribable; it was so intensely foul-smelling. There was marked cessation in odor after the first treatment, and entire disappearance of odor after the second treatment.

Case No. 4.—Mr. J. McF., of Chester, 63 years of age. Epithelioma on the right temporal region of three and one-half years' duration. Give three treatments one week apart with firm pressure. Discharged as cured.

Case No. 5.—Mr. George H., of Chester, aged 38 years. Pre-epitheliomatous concrete seborrhea of lower lip which showed prolongations of villi into the follicular orifices; one and a half years' duration. Had been previously treated with caustics. Showed marked induration posterior to the lesion which extended over about one-half of the lip, and was very resistant to treatment. Has been discharged as cured after five

exposures to the carbon-dioxide of one minute each with firm pressure. Treatments were given one to two weeks apart.

Case No. 6.—Mr. S. S., of Chester, 70 years of age. Epithelioma of the rodent ulcer type on the face below the left orbit about one and one-half inches in diameter. Had been under X-ray treatment at the Crozer Hospital for a long period of time, but resisted all sorts of treatment. Of five years' duration, processes having extended into the conjunctiva and both outer margins were intensely hard and indurated. Patient has received four treatments of two minutes each with firm pressure, averaging two weeks apart, and is still under treatment. About seventy-five per cent. cured. Condition has shown a gradual improvement, and it is anticipated that in a few weeks more the patient will be discharged entirely cured. Photograph of this case is presented to-day.

Case No. 7.—Miss M. A., 78 years of age, of Chester, Pa. Epithelioma on the angle of the left jaw of seven years' duration. Had been previously treated with caustics and acids without apparent relief. Received two treatments of one minute each with firm pressure two weeks apart. Discharged as cured.

Case No. 8.—Mr. J. R., Ridley Park, 75 years of age. Profuse epithelioma on the lower lip, of eight years' duration, involving practically the entire area; lip swollen to probably three times its natural size, with a foul odor and marked and intense ulceration. Patient had received all sorts of treatment, including the X-rays, without apparent benefit. Received two treatments, but did not again return. After the first treatment there was a decided decrease in odor, and after the second treatment odor had entirely disappeared with a marked improvement in the condition. Feel sure that if the patient had persisted in the treatment that he would have been entirely cured.

Case No. 9.—Miss S. C., of Upland, 42 years of age. Epithelioma on left temple of three years' duration. Previously received treatment with caustics, etc. Discharged cured after two treatments of one minute each with firm pressure two weeks apart.

Case No. 10.—Mrs. H. C., Woodlyn, Pa., 65 years of age. Epithelioma on right side of nose of five years' duration and about the size of small walnut. Had received two treatments of two minutes each two weeks between treatments, and has been discharged as cured.

Case No. 11.—Mr. A. J., Chester, age 19. Papilloma of right thumb of six months' duration, one inch in diameter. Was discharged as cured after two treatments of one minute each with firm pressure; one week between treatments.

Case No. 12.—Mr. B. McL., of Chester, age 72. Multiple epithelioma of right upper eye-lid extending up into the hair border. Has received all sorts of treatment with the X-rays, having at one time been presumably entirely cured, but has again broken down.

Was associated with intense odor, the upper eyelid having been entirely severed with the exception of the inner and external canthus which just about held it together.

Has had four treatments and is about seventy-five per cent. cured; still being under treatment. Odor disappeared after second treatment. Eyelid presents a more or less normal condition, having again attached itself to the upper margin. Ultimate cure is expected.

Case No. 13.—Mr. W. T. R., of Chester, 37 years of age. Cystic epithelioma of forehead just below the hair border of five years' duration. Had received three treatments of one minute's duration with firm pressure one to two weeks apart, and discharged as cured.

Case No. 14.—Mrs. L., of Chester, aged 74 years. Pre-epitheliomatous senile concrete seborrhea of left nose covering almost the entire lower side. Received one treatment of two minutes and discharged as cured.

Of the fourteen cases treated, extending over a period of eight weeks, ten have been discharged as cured, treatment extending in individual cases from one to eight weeks. Three cases are still under treatment with the prospects of ultimate cure, and one case did not return for treatment, although marked improvement had presented itself after two treatments. All cases which have been discharged as cured have practically been scarless,—a smooth, whitish to pinkish area presenting itself over the site of the previous lesion.

In closing, therefore, permit me to make a plea for the early destruction of all suspicious cutaneous growths with solidified carbon-dioxide for the following reasons:

Short duration of treatment.

Practical absence of pain.

Ability to reach areas beyond involvement.

Scarring practically absent.

Cosmetic effect obtained.

Epithelial covering usually the rule.

Lack of violent dermatitis usually reacting from the use of caustics, X-rays, etc., apparently no tendency to after degeneration, and the absence of local metastasis which occasionally happens with the use of the knife.

LATEST APPROVED METHODS TO MEET SOME ABNORMALITIES IN PREGNANCY AND LABOR.

BY

J. M. HEINBACH, M. D., KANE, PA.

(Read before the Homœopathic Medical Society of Pennsylvania, Williamsport, September, 1910.)

I HOPE I will be able to interest you for a few moments on a subject that is as old as the human race, yet it never gets too old to profit by any new and scientific progress and development that will be a means of lightening the sufferings of the prospective mother.

As civilization advances and the pride for dress to keep moving in the maelstrom of fashion is a predominating feature in womanhood, the obstetrical art must likewise be cultivated to the highest state of efficiency and no longer trusted to the old "granny" in the neighborhood. All the difficulties arising in labor can not be blamed on fashion alone, but the lack of proper care during the menstrual periods, the intermarrying of different tribes, clans and nationalities which leads to poor adaptability of the child's head to the pelvis of the mother; the abuses of civilization and dissipation; idle life of the mother which leads to relaxed condition of the uterus and abdominal walls and a greater tendency toward malposition—all of which are conducive to abnormalities that tax the skill and resources of the accoucheur.

Many of the present day difficulties that we meet were unheard of among primitive people. With them instinct and intuition prompted them to action and not acquired knowledge or scientific investigations. It behooves us, therefore, to apply prophylaxis in the obstetrical art as well as in all

other diseases. It is a known fact that the Japanese women have comparatively easy confinements compared to other civilized women; and their mode of dress, which gives room for growth to the pelvis, should be encouraged. They are usually small in stature yet invariably have a large, roomy pelvis. They are not boxed up in a corset from arm-pit to knees, as are a great many of our ultra-fashionable women in our highly civilized centers of the world. I shall now take up a few of the most annoying and desperate complications that we have to deal with.

Retained Membranes and Placenta.—It is not an infrequent occurrence for portions or even the whole membrane to be retained in the uterus after the placenta is expelled. Fortunately very little harm results from it. According to Shroeder they practically never cause bleeding. Mickel and Hegan, on the other hand, have shown that retained membranes could give rise to puerperal hemorrhage as well as septicemia.

Our best authorities agree that it is not wise to invade the internal parts in order to remove shreds of membranes or even greater portions in the absence of symptoms of infection.

As far as my individual experience goes I have never had any trouble. If I have any rise of temperature to deal with from any cause whatever, I first try to ascertain the cause and if it is in the genital tract I give a hot intrauterine douche with a liberal amount of pix cresol in it, and the indicated remedy. If I do not have definite indications for any other remedy I give them Echinacea. It has been proven to raise the opsonic index and has not only done good work for me, but for most everybody who has used it. Definite indications for such remedies as Lachesis, Arsenicum alb., Rhus tox., Bell., Bry., Verat. vir., etc., should be recognized and prescribed for according to our law of cure with the utmost confidence. It has been many a day since I have had any trouble with puerperal cases. If a liberal amount of pix cresol is used in the water to wash the hands and the patient's external genitals before and after labor, it will be seldom, indeed, that there will be any trouble. I say liberal amount, because it does not irritate the mucous surfaces and can not do any harm. I am not advertising this drug, either. I have seen adverse criticisms of it because of the way it is placed on the

market. That is nothing to me. I believe in holding fast to things that are good.

I read a rather interesting and novel paper in *International Clinics*, Vol. IV, 1909, by J. J. Rectenwald, Pittsburgh, Pa., who recommends using a gravity method in removing adherent placenta instead of the usual force method; and gives four principal reasons for using it:

1st.—“Inherent risk of infection owing to the introduction of the hand into the uterus.”

2nd.—“Extreme liability of uterine laceration by reason of an error of judgment as to the intensity and direction of manual force to be exerted.”

3rd.—“Imminent probability of an incomplete removal of the placenta.”

4th.—“Frequency of death owing to hasty removal of adherent placenta by force and attendant complications.”

He seems to have been rather unfortunate in his parturient complications in the previous year.

The liability of infection with our present day aseptic and antiseptic technique by introducing the hand into the uterus is practically nil. In my opinion the annoyance and anxiety to the patient while she was waiting for the weight tied to the cord to remove the placenta would be more detrimental than the speedy manual extraction and satisfied mind and relaxation that would naturally follow in knowing that it was all over.

There probably is no other time in a woman's life when she feels so strong a sense of relief as after labor; and a physician has no right to leave his patient without knowing that his work is completed and well done. The patient's knowledge of all being over affords relaxation of both mind and body, and gives Nature a chance to restore the mother to her normal condition in the most speedy way possible.

There is not much chance of lacerating the uterine wall if anybody has an educated touch. It is very easy to detect the placental site and separation is easily accomplished. If the fingers are swept over the placental site little elevations or islands can be easily detected and removed with either finger or curette. There is nothing like the finger for an instrument in the uterus whenever you can make use of it. You can feel what you are doing. It would, indeed, require brute force

to cause death in the removal of an adherent placenta a reasonable time after the birth of the child.

Placenta Previa.—This condition is always a serious complication and is a subject that always invites the closest attention and best efforts and skill of the attending physician. The first ten years of my practice I almost acquired the opinion that placenta previa was a mere text book topic and afforded exciting reading matter for the embryo doctor, but seldom verified in practice the real excitement in a physician's work at the bedside. When I got my first introduction to the real article about three years ago I changed my mind very quickly and found myself one of the busiest men on earth.

I was about four miles out of town with an old granny and a husband to help me. The os dilated about two-thirds and the placenta covering about three-fourths of the opening and a hemorrhage that looked anything but pleasant. I ruptured the membrane, but owing to the size of the child's head and poor contraction I could not get enough pressure against the bleeding surfaces to stop the flow. I tried to apply my forceps high up very gently but the placental attachment was over the anterior lower segment and the least effort resulted in a terrific flood. I immediately abandoned any effort with the forceps and performed podalic version. By this time the husband, who was a foreigner by birth, and had not very good command of the English language and did not understand the situation, got an idea that I was trying to kill his wife and was about to lay hands on me. With pretty strong language and accent I got him to assist me as well as he could and succeeded in delivering a nine pound baby and saved both. It was more impressive to me than any lecture I ever heard on the subject although the time was very short.

About five months later I had a case of central implantation and no dilation in a primipara thirty-nine years of age and nearly eight months advanced. This time I had time for preparation and to get assistance. I gradually dilated the cervix with my fingers and tore my way through the placenta and by podalic version I succeeded in drawing one leg into the cervix and all bleeding stopped. I delivered her of a medium-sized child which died about half an hour later in spite of all our efforts to save it. The mother got along very nicely with the exception of a slight infection which yielded to a light curettment, a hot douche of pix cresol, and an ap-

plication of tincture of iodine to the whole endometrium. She has been a healthier woman since than she ever was before.

The best method to adopt necessarily must be selective dependent upon the conditions present. If the complication is discovered before viability of the child and no uterine contractions present, temporizing might be justifiable in the minds of some for the sake of getting a living child. If such a course is decided on, the patient should be kept in bed and as quiet as possible until spontaneous labor sets in or is induced.

It is a question in my mind whether this procedure should ever be pursued if one takes into consideration the high mortality rate of the infants and the increasing danger to the mother as she approaches the end of gestation. Personally, I should advise to terminate labor before viability of the child, if it is discovered. Hemorrhage is usually the first sign of such a condition, and very seldom occurs until pregnancy is well along; for hardly ever is anybody called to treat placenta previa before viability of the child. Hemorrhage is invariably the first premonitory symptom and rings in a hurried call for the physician; and it is his duty to check it in the most speedy way possible, whether labor is in progress or not, and facilitate labor in the best way to fit the case. No single pet method can always be applied in all instances.

In lateral implantation, of which we have by far the most, with normal presentation and pretty good dilation, or an os that is easily dilated, one may manage to sweep the finger around the cervix as far as one can reach, and rupture the membrane. This is usually sufficient for the engaging part to descend and plug up the bleeding points and labor progresses in a normal way thereafter. Some advise the application of the forceps as I did in my first case; but I would vigorously condemn it. It is not an easy thing to apply forceps high up in otherwise normal conditions; and to apply them in this complication where you necessarily have to irritate the bleeding surfaces you only cause more hemorrhage. It does not look reasonable to me to use forceps at all unless you see in advance that the application can be easily made. This, however, is not the case. The application has to be made under most adverse circumstances when the os is only partly dilated and the presenting part high up. Such necessary manipulation could not help but cause terrific and prolonged hemorr-

hage and exsanguination of the mother, whereas introduction of your fingers and hand would at once plug the cervix, and by version you can use the leg and breech in succession as your plug and bleeding is under your control. In breech and transverse presentation we can only think of grasping the foot and plugging the os.

There may be rare instances where one meets with a very rigid os that will barely admit a finger, with very profuse hemorrhage, in which thorough packing would have to be resorted to as a preparatory measure under the most antiseptic precautions that can possibly be had under the circumstances. Maternity hospital facilities can not very well be carried around in an obstetrical bag that you have ordinarily to take with you. I find it very convenient, however, to always carry a few two-inch roller bandages in mine that I know are clean and ready for use when I need them. They make the best kind of packing material and are easily removed afterwards. The tampon should be removed in twelve to fifteen hours, and one of the above methods carried out. If one is prepared and can use one of the rubber dilators, such as Barnes bags, the balloon of Champetier de Ribes, Branne's Colpeurynter, etc., might be substituted. The Pomeroy bag is an active dilator and is not dependent on uterine force but controlled by the operator. It has two compartments and makes pressure from above which should control the bleeding effectually and ample time for good dilation can be taken. The Pomeroy bag appears the most reasonable to me of any, although I have no experience with any of them. H. H. Hussey praises this bag very much in the *American Journal of Surgery*, 1910, June number.

One must not forget that concealed hemorrhage can take place with the tampon or any of the rubber dilators, and should all be considered as preparatory measures and the patient should be carefully watched for signs of collapse, and immediate action instituted if such should develop. Version in one form or another, external, internal or the combined method or bipolar versions of Braxton Hicks must be used. The best method and one of the oldest is internal podalic version when at all applicable. The instrument is always on hand and has the cultivated sense of touch in it to guide you.

There is another method which is non-obstetrical and is only applicable in very select cases and suitable surroundings.

I have reference to Cesarean section. Briefly stated, this procedure would be only advisable in competent hands and antiseptic surroundings. Cases in which the cervix is very rigid and undilatable and tampon would fail to stop the hemorrhage, or where bleeding is checked and the os fails to dilate and recurrence of hemorrhage is imminent. Cesarean section should offer much in preventing mutilation of the lower uterine segment and lessening the mortality of both mother and child.

Miller, of Pittsburg, recommends tying the uterine arteries close to the cervix. He used this plan in fourteen cases with two deaths. While it might be an effective way to control the bleeding yet those accustomed to bipolar version would be just as safe and the future blood supply to the uterus would not be impaired.

From the study of this subject and in accordance with my paper we may form the following conclusions:

- 1.—Pregnancy should be terminated promptly after diagnosis of placenta previa has been made.
- 2.—Hemorrhage must be controlled.
- 3.—Laceration of the lower segment of the uterus and traumatism should be guarded against as much as possible.
- 4.—The life of the mother should be considered first and consideration to the child next provided it is living and within two months of term.
- 5.—Marginal cases demand very little more than tamponade and rupture of the membranes.
- 6.—Parietal and central locations always demand interference.

Puerperal Eclampsia.—There is still some doubt among able practitioners that cases of eclampsia occur in patients who have not albumin in the urine. This I do not believe. All the cases of eclampsia I ever saw in private or consulting practice had an abundance of albumin present. I could not find any authentic cases in literature that were true eclampsia without albuminuria. I realize that my experience is more limited than that of men associated with large hospitals. Dr. Robert Jordine, physician to the Glasgow Maternity and Women's Hospital, never had any cases without albumin being present. Nor did J. H. Ballantyne, physician to the Royal Maternity Hospital of Edinburgh. It is quite possible that there are some cases of convulsions during pregnancy without albumin in the

urine but it is questionable whether they were not hysterical or epileptic. We do know of a certainty that they have a toxic origin and the treatment resolves itself naturally to elimination, to rid the system of those toxins or deleterious substances through the bowels, the kidneys and the skin. This must be preventive as well as curative. If it were at all possible to impress expectant mothers sufficiently, to engage their attending physician not later than the fourth month of their pregnancy, and have him keep watch over the physiological functions of the excretory channels, especially the kidneys, many a woman could be carried safely through her period of gestation without convulsions and a possible loss of life.

No fixed rule can be laid down as to whether these cases must be treated as non-obstetrical or obstetrical, both methods being applicable in individual cases. The fact that cases occur in the post partum stage is sufficient evidence that the emptying of the uterus is often not sufficient to save the patient from this awful calamity.

S. H. Blodgett, Boston, claims that in some few cases of pregnancy where convulsions occur acetone and diacetic acid are present in large amounts in the urine and that alkali treatment will prevent the convulsions. It is, indeed, hard to tell what the best methods are to treat eclampsia. All agree that excretory functions must be restored if possible. Whether that can be done in a homœopathic way or with the crudest empirical prescribing depends. Morphine is less used, in fact condemned by our best men. It does not seem rational to use it. Drugs that will act on the kidneys and increase their action should first be considered. I would mention Cu. ars. as the king of them all and I could see the good results in all the cases in which I used it. This remedy in conjunction with a milk diet, colon irrigation and hypodermoclysis with saline solution and hot packs will control most cases. I have seen the odema of the limbs disappear in a week's time by the use of Cu. ars. 2x without any other aid when considerable albumin was present. If no improvement should follow the above treatment I would not hesitate to give saline purges and diuretics, such as citrate or acetate of potassium and large quantities of imperial drink including lemon juice in liberal amounts. The patient should be kept warm and guarded against any drafts to avoid any possible chills. A chill might throw more strain on the kidneys and precipitate a convulsion. A

sudden fall of temperature is very liable to prove serious in most all kidney lesions. The preventive treatment is quite satisfactory, and I could not record a single failure. The curative treatment is not nearly so satisfactory. There is more to do all at once. You must protect the patient from injuring herself and control the fits. Chloroform by inhalation probably acts the quickest, but is not striking at the cause and consequently not a very rational method of procedure alone. By using chloroform, however, you may subdue the fits and prevent injury and in the meantime apply curative measures which necessarily would be the same as those that are used for prevention, only more drastic.

Dr. Robert Jordine considers diuretics by the mouth too slow and uses injections of normal saline solution with acetate of soda, 1 to 160, two or three pints in the areolar tissues, usually under the breast or direct into a vein.

They should be put in a hot pack and afterwards kept between warm blankets. The pulse should be watched and stimulated if necessary. If such a line of treatment does not improve the patient, obstetrical methods should be instituted and the gravid uterus emptied in the most speedy way possible if labor has not already set in. I hope this subject will be thoroughly discussed so that all the information possible can be obtained. Much more could be written on this subject, but I merely hinted at a good many things and will leave it to you to discuss the details.

I will also present a little experience with a drug that has given me a good deal of satisfaction and my patients comfort at the same time. Every one of you have had primiparas where the os was rigid, the pain agonizing, in bed and out of bed, begging you to do something, yet no apparent progress. You do not want to stay and the patients do not want you to leave them because their suffering is so intense. I attended such a case about a year ago and I hardly knew what to do. I finally concluded to do something after several homœopathic prescriptions failed. I opened my case and gave her 1-6 of a grain of Heroin hydrochloride hypodermically and she lay down on the couch. She went to sleep and slept for several hours; and when I made my next examination she had progressed much faster than before and asked me why I had not given her that long before. She said, "For God's sake, give that medicine to every woman you attend." Since I have used it

in a number of cases where dilatation was slow and suffering intense and never had occasion to regret it. I could see only good from its use. The pains get more regular and durable and usually they sleep a good share of the time and always faster dilatation than before. I never repeated the dose up to date because labor followed in a satisfactory way. I had no stillborn child from it, no trouble but what seemed perfectly normal.

BLOOD-FINDINGS IN PNEUMOTUBERCULOSIS.—Hemoglobin and erythrocytes in the slightest tuberculous involvement of the lungs show very little reduction or may be normal; in the latter case, the norm in women should be remembered as less than that in the other sex. In the worst acute and chronic processes, with very marked phenomena of irritation, there is decided lowering of the hemoglobin and erythrocyte values, while serious cases lacking in pronounced phenomena of irritation, show high values because of the increased demand for oxygen from a lessened respiratory surface. The eosinophiles are distinctly increased in the lighter infections, but decrease as the case grows worse. The entire leucocyte count, as indicator of the organism's power of reaction, is commonly raised, the lowest figures being found in the defevered or feverless cases, rising or falling with the general condition of the patient—with the increase or decrease of the disease. The ratio between the neutrophiles and lymphocytes varies according to the violence and duration of the irritant phenomena, or, better, the phenomena of irritation—in light cases the lymphocytes are increased; in grave cases with more violent signs of irritation, the neutrophiles; in medium cases, both. Diagnostically, with subfebrility and no bacilli, but other certain indications lacking, a marked increase of the leucocyte count is found in new but focal or hidden cases.—Steffen (*Deut. Arch. f. klin. Med. B.* 98. *H.* 4.6.)

MORPHIN-URETHAN NARCOSIS.—The narcotic effects of morphin and of urethan are not merely those obtained by adding one to the other; rather do they heighten, reciprocally and in an enormous degree, each other's effect,—they are strikingly synergistic. Urethan per os develops narcosis only when the quantity used equals 1.5g. Morphine, alone and subcutaneously, required 0.02g.; but 0.0025g. of morphine, subcutaneously, plus 0.25g. of urethan per os develop a narcosis still distinct; 0.75g. urethan—of itself valueless—causes narcosis when to it there is added the action of 0.0006g. of morphin subcutaneously, and a like effect is got by 0.01g. morphin subcutaneously and 0.1g. of urethan per os. The two drugs, both given subcutaneously, show similar but still more pronounced effect. The time occupied in the narcosis is, of course, related to the size of the dose. 1.5g. of urethan causes an uncommonly long narcosis (21 hours), whilst narcoses by other drugs and methods endure from a few minutes up to nine hours, at the most.—F. Lindemann (*Zeit. f. exp. Pathologie. B.* vii. *H.* 3).

EDITORIAL

THE COUNTY MEDICAL SOCIETY.

THE County Medical Society is the organization around which the interests of the physicians in any community should center. In fact, the activity exhibited in the County Society is a very reliable index of the spirit of the physicians in a community. A live, progressive County Society means a strong and progressive professional spirit among its members, while poorly attended meetings and lack of interest in the scientific work of the organization is evidence of a state of decadence among the physicians that make up its membership.

We are well aware that the state of decay into which many County Societies have fallen is attributed to political causes, but such statements constitute a very poor excuse on the part of any medical organization. We are thoroughly convinced that a body of thoughtful, scientific physicians are perfectly capable of conducting the affairs of their County Society in such a way as to prevent the work of the organization being seriously interfered with by any political ring that may be formed. Lack of real, earnest work is usually at the root of the trouble. The old maxim that "work spells success" is as true in connection with medical organizations as in any other sphere of activity.

The annual presidential address recently delivered by Dr. Theodore J. Gramm before the Homœopathic Medical Society of the County of Philadelphia commended itself to all who had the pleasure of hearing it as a very practical review of the functions of the County Medical Society, and of the methods by which it can be made a success. One feature on which Dr. Gramm placed emphasis was the co-operation of the physicians constituting a County Society for the protection of its members against suits for alleged malpractice. This is an eminently fitting and practical work for every County Society to take up. Physicians are constantly exposed to the risk of suits for alleged malpractice on the part of persons who desire to obtain money from them by threatening to injure their professional

reputation. Nothing is so helpful to a physician in such a predicament as the united and cordial support of his professional brethren in the community in which he lives; in fact, experience has shown that it is very rare indeed that suits of this nature have been pushed when the individual alleged to have been injured learns that the doctor whom he is attempting to blackmail is not compelled to defend the suit himself, but that the County Medical Society of which he is a member proposes to defend it for him. The plan followed in most County Societies is to employ an attorney who receives a set amount for each case that he is called upon to defend. A committee of the County Society is appointed, and in case one of the members is threatened with suit for alleged malpractice he has the privilege of stating the facts of the case to this committee. If, in their opinion, his conduct has been in accordance with professional ethics, they recommend that the Society defend the suit, and the matter is turned over to the attorney of the Society. Not only is the physician thus provided with competent legal advice without expense to himself, but he also is accorded the privilege of summoning as expert witnesses any member or members of the Society that may be of assistance to him in his case. The cost of maintaining legal protection in this way is comparatively small when it is divided among a large number of men, and the satisfaction that a physician feels in the assurance of such protection more than compensates him for the small assessments that may occasionally be made to pay the fees of the attorney.

Dr. Gramm also advocated that the County Society should interest itself in a medical library. We will not go into this subject in detail as we have expressed our views regarding it in a recent editorial. It is sufficient to say that there is nothing that has a greater tendency to create a scholarly and scientific spirit among an organization of physicians than the possession of an up-to-date medical library. It is a feature which is of value to every member of the organization, and in time comes to be a source of pride and usefulness to all.

Dr. Gramm touched in his address upon the subject of members who are delinquent in their dues. This is a matter which is of considerable concern to almost every medical organization. It is surprising to know the number of physicians of high professional standing and of ample means who go on year after year in a medical society without paying the small dues to which they have obligated themselves in becoming a member. It is

not unusual to find men who are eight, ten and even twenty years behind in their dues. Were this the result of lack of means to pay the dues we would avoid any comment on the matter. But such is not the case; in the vast majority of instances it is purely and simply a matter of negligence, and yet persistent negligence of this kind is indeed difficult to justify. It is true that the by-laws of most societies provide for the suspension or expulsion of members who are in arrears with their dues for a greater period than three years, but the officers in authority frequently hesitate to carry out this step because they do not care to drive a good man out of the organization, nor do they care to impose upon him a public insult. We mention this in some detail because we feel that physicians do not think of it as seriously as they should, and we trust that these remarks may have some effect in reminding them that obligations of this nature are just as binding upon them as any other debt, and should be promptly met when the proper notices are sent to them.

An important function of the County Society is to look after the legal rights and prerogatives of its members and of the school of medicine to which they belong. It will not be long before the homœopathic school will be compelled to fight the oft-waged battle for its legal standing before the Legislature of Pennsylvania. The legislative committees of the County Medical Societies working in conjunction with the legislative committee of the State Society constitute the most efficient means of carrying out this contest. It is, therefore, a very proper time for the societies in the various counties of the State to put forth every effort to strengthen their organizations and to solicit the influence of legislators in preserving the interests of our school.

A WARNING IN FINANCIAL MATTERS.

A NUMBER of years ago, we took occasion to criticise adversely the tactics of certain promoters who were working their schemes among physicians. The active editorials bearing on this subject led to a discontinuance of confidential propositions, opportunities to get rich quick, etc., etc.

Of late there has come a renewal of promoters' activity among physicians. In one instance the promoting company

had the unlimited effrontery to place certain lots of ground in our name without as much as asking permission. For several days we have had a proposition each morning.

Here is a sample :

"With your permission we have a confidential proposition to submit to you that will involve our having the prestige of your name as a lot holder."

To refuse such generous offers involves no sacrifice, as land given away promiscuously is in all probability not worth the paper upon which the deeds are executed. We would warn physicians to go into no concern on the mere statement that certain prominent individuals have invested, as we can have no assurance that such parties were not given the stock or deeds for advertising purposes pure and simple.

From a financial standpoint physicians are a gullible lot, and a company that tries to secure them as stockholders is on no better footing than a business man who endeavors to borrow money of a woman.

EHRlich'S NEW REMEDY FOR SYPHILIS.

THE attention of the entire medical world has been attracted to the statement of Professor Ehrlich that he has discovered a drug which is capable of curing syphilis in one or two doses. This remedy is an arsenic compound, the chemical name of which is "Paradiamidodioxyarsenobenzole dihydrochlorid." The substance is more commonly known as "606." Ehrlich was led to make his discovery by searching for some chemical substance capable of destroying animal parasites in the blood. The success attendant upon the use of arsenic in the treatment of trypanosomiasis led him to make some experiments as to the effect of arsenic on the parasitic cause of syphilis. He found that certain compounds of arsenic destroyed the parasite very quickly, but it became necessary to find a remedy that was capable of destroying the parasite without producing an injurious effect on the individual infected by the parasite. Ehrlich also ascertained that it was not safe to attempt to destroy the parasites by means of repeated small doses of a drug that was antagonistic to them for the reason that in the course of this method of treatment the parasites often developed an immunity to the drug which they transmit to their progeny. He, there-

fore concluded that he must find a drug which in one or two doses would destroy all the parasites, leaving the host uninjured, and this result he claims is accomplished by "606."

This substance is a yellowish powder which rapidly absorbs oxygen from the air, and is, therefore, put up in vacuum tubes. It is administered by hyperdermic injections deep into the muscles or beneath the skin. The injections are attended with some pain, and in many instances slight swelling arises on the second or third day. There may be a slight rise of temperature, but as yet no serious toxic effects on the human being have been observed.

Ehrlich claims that when properly used his preparation is capable of destroying all the parasites of syphilis in one or at most two injections, and the rapidity with which the manifestations of the disease have disappeared after the use of the remedy would seem to strongly confirm his remarkable statements. At the present time, observers all over the world are testing the remedy from a clinical standpoint, and while it is yet too early to come to any definite conclusion, it seems to be the almost universal opinion among those who have employed it that in efficiency and in rapidity of action it far surpasses any other method of treating syphilis. Under its use ulcerating and nodular syphilides, syphilitic lesions of the palms of the hands, and many other obstinate and serious manifestations have disappeared almost entirely within a week or ten days. In many instances in which mercury had proved to be inefficient in controlling the disease, one or two injections of "606" brought about immediate curative results. As the remedy has only been in use a comparatively short time, the question of permanency of the cure is undecided, and it will naturally be several years before we can have positive information on this point. There is no doubt, however, that Ehrlich's discovery is one of the most remarkable in the history of modern medicine, and demonstrates clearly that in those diseases in which it is impossible to bring about an immunity by means of vaccines or sera, the same object can be accomplished by chemical substances.

It may be of interest for our readers to know that the designation "606" is applied to this substance because it is the six hundred and sixth preparation made by Ehrlich in his attempt to find a chemical substance that would meet the therapeutic indications in the treatment of syphilis.

GLEANINGS

POISONING FROM BITES OF COPPERHEADS.—In a series of 99 cases of copperhead snake bites there were only five fatalities, four of which could be attributed to the character of the treatment adopted. The author draws the conclusion that the danger from the bite of the copperhead snake is greatly overestimated, and that the local treatment is unnecessarily severe and dangerous. He advises a series of ligatures drawn tight enough to prevent the return of venous blood from the wound. Except an antiseptic dressing, the wound should be ignored. However, when a young child who has been bitten by a large snake comes under treatment, at once dissection of the wound and the use of crystals of potassium permanganate are advisable. To counteract serious fall in the blood pressure adrenalin may be administered by intravenous injection. Strychnine, caffeine and camphorated oil may be necessary. The patient should be kept in the recumbent position.—Prentiss Williams, *Jour. of the A. M. A.*, Aug. 27, 1910.

CHARLES D. FOX, M. D.

CONCUSSION OF THE BRAIN.—A boy, aged 6½ years, fell striking the left side of his head and causing an abrasion just above and behind the external canthus of the left eye. Unconsciousness did not develop, but blindness appeared at once. Ten minutes after the accident examination showed total blindness, great exaggeration of the patellar reflexes, marked Babinski sign on the left side, and decided spasticity of both lower extremities. The pulse was full and irregular, though normal in rate. Respiration was deep and sighing with a rate of 16 per minute. The temperature remained below 99.4 F. Two hours after the first examination he could recognize a lighted candle, and one hour later objects and persons could be distinguished with precision. The following day he felt well except that he experienced vertigo when sitting up in bed. Also nausea and vomiting had occurred early in the morning. The Babinski sign had disappeared. Four days after the accident he had completely recovered. The reporter, Alfred Reginald Allen, sums up as follows the interesting features of the case: "Rapid clearing up of the complete blindness, the sudden causation of the monolateral Babinski reflex, which cleared up within eighteen hours, and the very evident interference with the spinal reflex inhibitory mechanism, with no symptoms of compression."—*Jour. of the A. M. A.*, Sept. 10, 1910, p. 945.

CHARLES D. FOX, M. D.

KERNIG'S SIGN.—Of 75 cases of general paresis, Kernig's sign was present in 63 cases. Those in which the sign was not found were all early cases of the disease. The author, Samuel Stern, states that Kernig's phenomenon is

always present in the late stages of paresis and that its presence and its intensity is indicative of the progress of the disease. According to Wilson, Kernig's sign occurred in 26.8% of 120 non-meningitic cases. This incidence appears to be explained by certain aspects of Somer's compilation of 1,180 autopsies at the Norristown Asylum. Somer's work shows that a large percentage of arterio-capillary fibrosis is accompanied by some form of meningeal involvement. In conclusion, when found in patients with arterio-capillary fibrosis Kernig's sign appears to signify meningeal involvement.—*Jour. of Nerv. and Mental Dis.*, Aug., 1910.

CHARLES D. FOX, M. D.

DEAFNESS DUE TO LESIONS OF THE BRAIN.—Total bilateral deafness due to lesions in the brain is rare because the cortical centers of hearing, lying in the temporal convolutions, receive impulses from both ears, and, therefore, total deafness necessitates a bilateral lesion. According to Starr, the number of cases that have come to autopsy is sufficient to prove that deafness is inevitable when destruction of both temporal lobes occurs. After reporting a case of his own and reviewing ten cases found in the literature the author concludes that: (1) Deafness may be produced by lesions of the pons varolii; (2) the deafness will be on the side of the lesion if the acoustic nucleus only is affected; (3) the deafness will be bilateral if the trapezoid fibres are involved at their recussation in the raphe; (4) the deafness will be on the side opposite to the lesion if the superior olivary nucleus and the lateral part of the lemniscus are affected in the pons. The kinds of deafness are divided into: (1) Labyrinthine deafness with associated vertigo; (2) acoustic nerve deafness from primary atrophy or associated with tabes; (3) central acoustic tract deafness, associated with symptoms of pontine or crural symptoms; (4) cortical deafness, usually associated with aphasia and presenting the symptoms of psychic deafness.—*Jour. of Nerv. and Mental Dis.*, July, 1910, p. 410.

CHARLES D. FOX, M. D.

BRONCHIAL ASTHMA AS A PHENOMENON OF ANAPHYLAXIS.—A guinea-pig may be injected with a small quantity of horse serum without apparent effect. If one waits a few weeks, however, and repeats the experiment the animal invariably dies in a few minutes. The same experiment can be performed successfully with other proteins such as egg albumin, milk, etc. The interval between the two injections may be prolonged, and even after years the second injection is capable of inducing a definite toxic effect. In fact, the sensitizing effect of one injection may be transmitted from mother to offspring. It has been established that the cause of anaphylactic death is bronchial stenosis. Hay fever is the product of reaction to the toxalbumins of the pollen of some plants. Injection of such a toxin into normal individuals is devoid of apparent effect. On the other hand, if a minute quantity of the toxin is injected into one who is subject to hay fever the symptoms of hay fever and of asthma shortly appear. In other words, the hay fever patient is one who is sensitized to the specific proteid of the pollen of a definite plant. On this foundation of facts the theory is offered that asthma is an anaphylactic phenomenon occurring in individuals who are sensitized to a specific substance and

that the attacks represent the reaction of the organism to an intoxication by that particular substance. S. J. Meltzer, *Jour. of the A. M. A.*, Sept. 17, 1910, p. 1021.

CHARLES D. FOX, M. D.

THE TOXAEMIAS OF PREGNANCY.—Davis (Philadelphia) has touched upon most of the salient points of this subject. He says it is not sufficient to examine the urine, nor can a case of toxæmia be intelligently studied by urinalysis alone. One experienced in obstetrics can recognize developing toxæmia without the examination of the urine. The nervous symptoms first attract attention. Apathy, melancholy, neuralgic pain, anorexia, exaggerated reflexes, disturbed action of secretory nerves, pernicious nausea, epigastric crises, disturbed vision and disturbances of special senses are all symptoms of this condition. The circulatory symptoms are altered, pulse tension of two sorts: the firm, heavy, constantly high-tensioned pulse, which is readily recognized, and a more dangerous variety because sometimes overlooked, namely, a rapid pulse whose tension is not at first raised but develops high tension upon very slight disturbances. Heart sounds are exaggerated in force and tone. As the heart muscle becomes involved the sounds become obscured and less clear. In chronic toxæmia with damaged heart there is feeble heart action and rapid pulse with low tension. In thyroid toxæmia rapid pulse with high tension is present. In intestinal toxæmia, rapid pulse without high tension is observed, and when hepatic toxæmia has caused degeneration of the epithelia of the kidneys, pulse tension is usually high.

The rapidity of the pulse does not coincide with its tension. The chronically rapid pulse is illustrated best in thyroid toxæmia; the rapid, weak pulse, in pronounced hepatic toxæmia with rapidly developing pernicious anaemia.

In examining the thorax, not only should the condition of the heart be investigated, but substernal pain should be sought as a symptom of great importance. This often accompanies pressure upon the tip of the sternum, but in severe cases extends upward beneath the entire surface of the sternum. In severe toxæmia with crises without convulsions there is a constant tendency to pulmonary oedema, which can be detected by altered signs at the bases of the lungs. Physical examination of the abdomen in toxæmia gives tenderness at the epigastrium, with more or less impaired peristalses of the bowels, and a tendency to the accumulation of gas. The uterine muscle is irritable unless the toxæmia be so severe that all the muscular tissues infiltrated with poisoned blood become partially paretic. Fetal heart sounds are quickened, or in severe cases dangerously slow. Fetal movements may be accentuated or lessened.

A large quantity of serum albumin in the urine with granular, fatty, or blood casts, indicates kidneys whose epithelia are badly damaged. A considerable quantity of serum albumin with hyaline casts or cylindroids, indicates an overburdened kidney, but one whose epithelia are not dangerously damaged. It is significant that rapidly fatal cases of toxæmia may show neither casts nor albumin in the urine.—*Amer. Jr. Obs.* Vol. 61, 577.

THEODORE J. GRAMM, M. D.

PASTEURIZED AND STERILIZED MILK FOR CHILDREN.—Legrand Kerr has compared these two forms of milk in the dietary of children. He says unless every detail of pasteurization is carried out with exactness, the product produced is not much safer than ordinary untreated milk. And even when carried out the same diligent care must be used to safeguard the product against contamination. Whether pasteurized or sterilized, the milk must be clean to start with. The producer is less an offender than is the consumer. Still it is true that both of these processes permits the producer to use milk which would otherwise be unsalable within a few hours, and much of the milk is unclean to start with.

Sterilized milk is never sterile, since a higher degree of heat is necessary to render it so. We should not use a product which shows a high bacterial count at any time, since toxins have been produced which are not destroyed by heat. The author insists that milk should be allowed to reach a higher temperature than 50 degrees.

Sterilization coagulates the albumin; it renders the casein more difficult of precipitation by rennet; it frees some of the fat; changes the sugar in ways not yet determined. The result of such changes is: An added difficulty of digestion more than most children can overcome without disturbances of nutrition and digestion. Also there is an appreciable difference in the ability to digest the fats (free fat being difficult of digestion) and therefore a chronic state of partial fat starvation.

What has been said of the sterilized product is in a smaller measure true also of the milk treated by pasteurization. Milk treated by either process is rendered less valuable as an article of diet for children, and in many instances the false sense of security born of its use still further lessens its value. If either process is necessary, the process should be carried out in the home. It should always be insisted upon that the milk be of the best obtainable quality.

The author also says if a sterilized or pasteurized milk is used there must be a difference in its modification. It must be less concentrated than the raw product, but the sugar should remain as high. Disturbances of digestion frequently occur and the milk is blamed, when really the modification is at fault.—*Amer. Jr. Obs.* Vol. 61, 692.

THEODORE J. GRAMM, M. D.

LACTIC ACID BACILLI: A STUDY OF THE BACTERIOLOGY OF THE INTESTINAL TRACT.—Arthur I. Kendall, of the Department of Preventive Medicine and Hygiene, Harvard Medical School, reviews the history of lactic acid therapy and reports some important experiments made with the common intestinal bacteria. He points out the fact that the reputed beneficial effects of the lactic acid producing bacilli found in kefir have not been demonstrated experimentally, but are based upon purely circumstantial evidence. A study of the metabolism of the intestinal bacteria, however, reveals certain facts which may well be utilized in the therapy of a number of intestinal and metabolic disturbances.

There are found normally in the intestinal tract three groups of bacteria, one setting up lactic acid fermentation, another being proteolytic, or putrefactive, while the third group has a dual action. The lactic acid bacilli found in milk localize themselves in the small intestine of man

and are fairly constant in the intestinal tract of children. There is, however, another lactic acid bacillus which is normally found in the intestine of many higher animals, but which is located in the large intestine. This is the *bacillus acidophilus*.

The proteolytic organisms are putrefactive in action. They act upon protein and protein decomposition products forming aromatic substances, indol, skatol, phenol, and aromatic oxyacids. These products are absorbed and are looked upon as the cause of autointoxication.

The third group is facultative with respect to protein and carbohydrate requirements. These bacteria can develop equally well in protein media and in carbohydrate media containing only small amounts of protein. They constitute far the largest of the three mentioned groups and are best represented by the *bacillus coli communis*. The following is an interesting experiment demonstrating the facultative nature of the *bacillus coli*:

Two portions of meat juice bouillon were prepared, each of exactly the same composition and reaction. To one portion one per cent. of dextrose was added and the two flasks were then inoculated with the same strain of *B. coli* and incubated for one week. At the end of that time the contents of the flask were analyzed chemically.

The flask containing no dextrose contained ammonia, indol, skatol, phenol, and aromatic oxyacids. It was alkaline and foul smelling. The contents of the flask containing dextrose were acid, of agreeable odor, and contained lactic acid, carbon dioxid and hydrogen.

This experiment demonstrates that the simple addition of a carbohydrate changes the type of bacterial decomposition from the putrefactive to the fermentative. Besides, in the intestinal tract such a change in the diet induces a distinct decrease both in the numbers and vitality of the obligate proteolytic organisms, accompanied by a corresponding increase in the normal intestinal lactic acid bacteria. A secondary result of this alteration in the intestinal flora is a corresponding decrease in the amount of aromatic bodies excreted in the urine, especially of indican, which may be accepted as an index of the degree of intestinal putrefaction. From this it may be seen that the reputed beneficial effects following the introduction of carbohydrates and of artificial cultures of lactic acid bacilli may result without the intervention of these bacteria at all.

Kendall believes that there may be decided bacterial decomposition of proteid in the small as well as in the large intestine. This occurs as a result of the symbiosis of organism of the *bacillus subtilis* group together with the *colon bacillus*. The following experiment demonstrates this fact:

A subtiloid bacillus of intestinal origin was allowed to grow in milk; a moderate peptonization of the casein took place. A colon bacillus of similar origin coagulated the casein and produced a small amount of gas as well.

If, however, after the subtiloid bacillus had partially peptonized the casein the colon bacillus was inoculated, there was further liquefaction of the casein and a large volume of gas was liberated.

(This experiment, therefore, brought about a chemical change in the milk which it may be assumed with reasonable certainty takes place in

the intestinal tract of infants in a common type of diarrhœa which has well been designated "fermental diarrhœa.")

Kendall summarizes the types of undesirable bacterial activity taking place in the intestinal tract of young children fed upon cow's milk as follows:

1. A true proteolytic type, characterized by the formation of putrefactive products such as indol, phenol and oxyacid.

2. A mixed putrefactive and fermentative process in which proteolytic and facultative organisms act symbiotically, producing through their symbiotic action activity considerable amounts of gas and destruction of casein.

3. A true fermentative type in which there is an unrestrained overgrowth of true lactic acid bacilli. Salge has shown that in certain of his cases an enteritis resulted when the normal intestinal lactic acid bacillus of the acidophilus type proliferated to an unusual degree. This is frequently seen in infants whose diet contains an excess of sugar, e. g., malt-soup.—*Archives of Pediatrics*, Aug., 1910.

C. SIGMUND RAUE, M. D.

TRADITION ANNOYED.—Whenever the subject-matter permits, it is extremely probable that some one will lug in the remark that, after death a bacterial invasion of tissues takes place. Dr. Strauch (*Zeitschrift f. Hyg.*) examined bacteriologically 2,000 cadavers within 48 hours after death, using in each case the blood contained in the heart. The investigation demonstrated that a postmortem bacterial invasion of the blood stream within the time mentioned above was purely subjective and domiciled in the encephalon of the individual alone, uttering the sentiment. In children an increase of bacteria in the blood during or after death seemed somewhat probable. Of the 2,000 cadavers about 50% were bacterial hosts. Streptococci were most often present; then in sequence: the pneumococcus, bacterium coli commune, staphylococcus. In chronic diseases, quite perfect in development and aspect, the blood stream was commonly sterile, the exceptions occurring in early childhood and in old age.

DIAGNOSIS AND THERAPY OF LUES RELATIVE TO MODERN RESEARCH.—Buschke has made an inclusive review of modern syphilography, particularly in regard to the advances made in the transmission of lues to animals; the discovery of the spirochaete pallida; sero-diagnosis. This review of an enormous modern literature leads to deductions fairly interesting in character, thus: in the consideration of syphilis diagnostically and prognostically, clinical observation based upon the reliable, pre-modern data is, by far, of the greatest import and the most essential; to which, in certain cases, the results of modern investigation may be added as adjuvant and as permitting greater certainty. Therapeutically, modern research has produced nothing of any appreciable value so that, as hitherto, our chief reliance is upon mercury and iodine, which, at least in a recent case, are of the greatest significance. Whether these remedies are prophylactic for the tertiary stage or for post-syphilitic troubles is, in the individual case, impossible to say. (*Berl. kl. Wochensh.*)

SYPHILIS OF THE BONES IN SKIAGRAPHS.—Syphilitic affections of the

bony system are by no means as rare as is commonly supposed, and Hagen (*Muench. med. Wochenschrift*, No. 33) during the last twelve months has collected a large number of Roentgen pictures of all forms of bone syphilis. The disease thus located, shows always typical symptoms in the skiagraph, so that diagnosis is commonly not at all difficult for any one with experience in this department of medicine. The morbid changes present are particularly characteristic where the process is localized in the periosteal tissue. The thickening of the periosteum, which is sometimes separated from the cortex of the bone by a layer of tissue distinctly exudative, is almost invariably circular; as a rule, quite circumscribed in area, and its contour quite distinct in its skiagraphic contrast with healthy tissues. If the cortex is implicated, the Haversian canals, increased in volume by luetic exudate, may be seen distinctly in the skiagraph as long strips. The shadow cast by the area involved is, therefore, somewhat more diffuse than in a simple periostitis luetica. In the surrounding healthy tissue there usually develops a reactive inflammation in rapid sequence, which, as a rule, leads to a more or less extensive sclerosis of the osseous tissue. The periosteal and cortical gummae are oftener not recognizable. An extraordinary intense implication of the adjacent periosteum is, however, a constant phenomenon. The gumma appears imbedded in the cortex, destroying it, and is then walled off from healthy tissues by the products of a reactive inflammation. It is characteristic that the adjacent areas of bony tissue are not, as in tuberculosis and acute inflammatory processes, reduced to Sudeck's atrophy. Syphilitic otitis and osteomyelitis are diagnosed by the fact that the processes of disintegration and hyperplastic proliferation are carried on side by side. If several foci appear simultaneously, attaining the size of a walnut or larger, but possibly varying among themselves in volume, it may be considered as a diffuse morbid condition which, because of the odd forms just noted and ordinarily visible skiagraphically, renders differential diagnosis less difficult. Ultimately the process becomes, in part, disintegrant; in part, extremely sclerotic. Almost always the periosteum becomes involved in the form of an extensive and ossifying inflammation of a type often extremely irregular (stalactite formation; a melting or mixing together of tibia and fibula, etc.)

THE NATURE OF THE CAUSE OF TRACHOMA.—Herzog (*Deutsch. med. Woch.* No. 23, 1910) found that the elements in trachoma granules were identical with involutional forms of the gonococcus of Neisser not yet cognized. The infection becomes possible for the reason that these forms of the coccus, because of symbiotic adaptability to a state of intra-epithelial parasitism, have continued and multiplied within the epithelial cells of the conjunctiva, forming there the zooglae known as trachoma bodies. Hence, the trachoma bodies or granules are minute protozoa. The author was able, in a case indubitably gonobleunorrhea of the eye, to demonstrate the involution forms and the development of trachomal bodies; furthermore, by an inoculation of a pure culture of the gonococcus upon the healthy human conjunctiva of an eye, blind from glaucoma absolutum, he succeeded in developing trachomal corpuscles. Involution forms of the gonococcus were also frequently demonstrated in leucocytes.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY A. LEIGHT MONROE,
Miami, Florida.

MENTAL SYMPTOMS.—William Boericke, M. D., San Francisco, in the *Pacific Coast Journal of Homoeopathy*, April, 1910.—Homoeopathy has occupied its large and commanding position in the therapeutic field for over a century. To a close observer it is evident that its distinctive doctrines—the similar relationship—the single remedy, the attenuated dosage, symptom totality, the weighty influence of dyscrasie in the treatment of chronic disease—its distinctive doctrines—each and all in turn are being rediscovered, if not advocated, by leaders of the regular school. True, only here and there, as a voice in the wilderness, but nevertheless a voice from outside our own ranks. It behooves us of the homoeopathic school not only to be the custodians of Hahnemann's teachings, but we must bring whatever light modern thought and science has to offer to their further development and practical application. If we fail to do this, we may wake up some fine morning and find that our distinctive field has been pre-empted by leaders of the old school and we deprived of our birthright. Among these distinctive doctrines is the totality of symptoms as the basis for the prescription. In arriving at the characteristic totality, every careful prescriber sooner or later learns that the mental state of the patient is of paramount importance, and when successfully covered by a corresponding drug, curative results may confidently be expected. Says Maudsley, one of those voices in the wilderness: "Perhaps we do not, as physicians, consider sufficiently the influence of mental states in the production of disease, and their importance as symptoms, or take all the advantage we might of them in our efforts to cure it."

To Hahnemann belongs the credit of first calling attention to the great importance of mental symptoms as guides, both prognostically and therapeutically. To him belongs the exclusive credit again of eliciting the effects of drugs on the mind, of showing the symptoms to be of the greatest value in curing all manner of disease. In regard to the value of mental systems in prognosis, we all have verified Hahnemann's teachings in the "Organon," paragraph 253, where he says:

"Among the signs that, in all diseases, especially in such as are of an acute nature, inform us of a slight commencement of amelioration or aggravation that is not perceptible to every one, the *state of mind* and the whole demeanor of the patient *are the most certain and instructive*. In the case of ever so slight an improvement, we observe a greater degree of comfort, increased calmness, and freedom of the mind, higher spirits—a kind of return of the natural state. In the case of ever so small a commencement of aggravation we have, on the contrary, the exact opposite of

this: a constrained, helpless, pitiable state of the disposition of the mind, of the whole demeanor, etc." He adds this caution, however, that "the signs of improvement in the disposition and mind may be expected only soon after the medicine has been taken, when the dose has been *sufficiently minute*."

And again, paragraph 211: "The state of the disposition of the patient often chiefly determines the selection of the homœopathic remedy;" and paragraph 212, "There is no powerful medicinal substance which does not very notably alter the state of the disposition and mind in the healthy individual," and paragraph 213, "We shall, therefore, never be able to cure homœopathically, if we do not observe along with other symptoms, those relating to changes in the state of mind and disposition, and if we do not select from among the medicines, a disease force which, in addition to the similarity of its other symptoms, is also capable of producing a similar state of the disposition and mind." And then he adds the famous footnote verified thousands of times: "Thus aconite will seldom or *never* effect either a rapid or permanent cure in a patient of a quiet, calm, agreeable disposition, and just as little will nux be serviceable where the disposition is mild and phlegmatic."

This great importance of mental states is a very reasonable thing when we consider the relation of mind and body. Every one knows from daily experience and observation that they act and react upon each other.

Regularity in mental action, constancy of behavior under like conditions, is a universal feature of mind. It is sanity. This regularity in mental action may be changed or destroyed by influences from within and from without. The *body* influences the mind, producing mental states according to integrity of its functions. Morbid states of the *body* can change the whole tenor of our thoughts, can change the mind and its affections. What are the mental symptoms accompanying diseases of the heart, of the lungs, liver, sexual organs? They are unquestionably different in each case. This change in the character of mental action due to *bodily* disease is caused by change in brain circulation, change in quality of blood and secretions, in nutritive disturbances, by toxins from without or generated by the organism itself. As disease can change the mental processes, so drugs do the same, as our provings testify, and the law of similarity applies equally to disturbances in both realms—physical and mental. Drugs possess this power of changing mental function by direct action on the brain like Anacardium, Hyoscyamus, Cannabis indica, etc., or by change in the quantity of blood supply to the brain, like Aconite and Glonoin, or by change in its quality, like Arsenic, Kali Phosph., etc. Such drugs that impoverish the blood have mental symptoms analogous to those accompanying starvation, as Arsenic. This drug causes anguish, despair, seeing spectres and suspiciousness, which is one of the most striking results of malnutrition. To this group belong Calcarea, Natrum, together with such as have fear of impending danger, despair, difficult thinking, etc.

But aside of this influence of the body and its states upon the mind, it is equally certain that mental states when continued, will sooner or later cause abnormal functional and organic disorder in various bodily organs. In other words, mental states will ultimate themselves in corresponding bodily disturbances.

"All consciousness is motor," says modern experimental psychology. Mental states, emotions good or bad, ultimate themselves in bodily function and locate themselves in organic retreat. Mental states become embodied physical conditions, not in any haphazard way, but absolutely, on definite organic lines. Observe how fear strikes the heart and what anxious fear and apprehension accompany some affections of the heart; then remember Aconite with its fear and similar organic lesion. Anger, disappointment and envy touch the liver, which in its turn, when deranged, engenders a gloomy state of mind. The emotions powerfully excite, modify, or altogether suspend the organic functions; pleasurable emotions tend to excite the nutritive processes, increasing the activity of secretion, whereas painful ones act both in stimulating and arresting secretion. Thus grief excites the lachrymal secretion, but extreme grief may altogether check it.

Rage excites the salivary glands, fear checks them; anxiety suspends the gastric, while extreme fear induces perspiration; grief and other depressing passions relax the arteries, enfeeble the heart, dull the eye, impede digestion and play a large part in the causation of disease. Diabetes and heart disease are frequent ultimate results. Joy exerts an enlivening influence, quickens the pulse and respiration, and expresses itself in laughter and song, and aids in recovering from disease. Excessive joy may produce death. Physiologic psychology teaches that every shade of variation of the psychic life is followed by imperceptible change of the inner organs; every mental state somehow runs over into a corresponding bodily state, and it is because of this "objectifying activity of the mind," to quote a modern psychologist, that mental symptoms are so important.

To illustrate, let us consider some of the physical effects of fear. Fear upsets the equilibrium of the body, the flow of electric currents is disturbed as the galvanometer shows, the nervous system is weakened and trembles; the heart and lungs contract; less air-cell work is done, less carbon dioxide comes out of the blood, less oxygen goes in, the circulation is impeded too much, toxins are generated in the tissues, still further devitalizing the blood for body building, and by the law of bacterial reproduction, there is rapid increase and fermentation of animalcules in the system, which may be injurious and indicates a decaying condition. Hence the common perception that the way to get a disease is to fear it, and the way to escape it is not to be afraid. Is not the first mental medicine, therefore, to be administered to every patient the removal of fear and the restoration of courage and trust? Is not this the keynote to the success of many an old family doctor, and is not the opposite the guilt of the quack?

All evil emotions, hurry, worry, dread, remorse, jealousy, hatred, impurity—they all act upon the body in such a way as to depress its function, vitiate the finest fluids and occlude the smallest vessels. Their action lies in the perversion of life, and we have as first manifestations restless, unhappy, melancholic states. These in turn may so change the quality of secretions and circulation and nutrition that bodily disease results or a state of vulnerability established that offers a favorable soil for disease germs to invade the organism and establish their insurrec-

tionary government. Hate is the most injurious of all these evil emotions. Chemical tests have been made of the secretions of persons in cheerful, peaceful states of mind, and no poisons found in them; similar tests of the same persons while angry, or just after, revealed alkaloidal poisons of virulent character. It is interesting that as far back as 1845, Dr. Atomyr, one of Hahnemann's immediate disciples, studied the physical symptoms of some of the emotions, especially terror, fear and grief, both as noxious factors and as possible curative agents, suggesting the possibility of administering attenuations of secretions rendered toxic by such emotions. It remains for modern laboratory psychological investigation to furnish the scientific basis for such biological pharmaceuticals.

Probably as a necessary reaction from the dominating mechanical and local therapeutics of the last half of the past century, numerous mental methods of cure, Christian Science, New Thought, etc., have usurped the therapeutic field. This use of mind force direct upon mind without the intervention of the ordinary vehicles, a therapeutic wireless telegraphy, must be reckoned with, but is not a part of homœopathy.

Yet, true to his far reaching sweep of vision, even here, Hahnemann, over a hundred years ago, recognized its legitimacy, as seen in paragraph 208, "Organon," where he says: "Neither should the physician overlook the patient's state of mind and temperament and observe if it inclines to prevent the cure, or whether it *might be necessary to direct or modify his mental condition by psychical means.*"

He thus recognized in such psychical means helpful measures of which the physician can and ought to avail himself.

The wealth of our materia medica as a record of mental effects of drugs is indeed vast, and to but a very limited degree utilized or verified. Hering did most in this as in many other pathfinding directions, and his classical "Analytical Repertory of the Symptoms of the Mind" is a monument to his discerning genius and an invaluable possession of our school.

In certain drugs the mental symptoms lead and determine almost absolutely, like Aconite, Ignatia, Cannabis ind.; in others, although important and characteristic, yet they are associated with and expressive of a physical state that is more indicative of the remedy. Thus, our great liver remedies like Chelidonium, Podophyllum, or uterine remedies like Lilium, Sepia, etc., have their mental state secondary to the physical lesion, whereas the mania of Hyoscyamus, the anxiety of Aconite, the mental and emotional instability of Ignatia, are less dependent on recognized physical lesion.

Where mental states and emotions are evident primary causes or contributing factors to the production or continuance of diseased conditions, homœopathy offers much useful aid, thus: Remember the adaptability of Coffea, Aconite and Opium to the ill effect of different emotional disturbances, especially Gelsemium to the effect of fear. Ignatia and Phosph. acid to the effect of grief, etc.

From the standpoint of the general practitioner, merely as illustration, let me review a few remedies, whose mind symptoms have been verified. Passing over the well-known anxious, restless, agonized Aconite with its fears and forebodings, whose mental state dominates and characterizes every other symptom-group; the wild, restless, violent, noisy Belladonna;

the terror-stricken Stramonium, the jealous, lewd, lascivious, silly, agitated Hyoscyamus; the oversensitive, snappish, uncivil, irritable, angry Chamomilla; the gentle, timid, yielding, weeping Pulsatilla, with not much reserve force and then fretful, morose and easily put out of sorts. Let me call to your remembrance two or three remedies of special wide range of mental application for cases presenting themselves to the general practitioner.

Anacardium is of great value in many conditions associated with profound melancholy, hypochondriasis, hypersensitiveness and irritability. This hypochondriacal state is associated with gastric disturbances, constipation and hæmorrhoids. It follows and often displaces Nux, which has similar irritability, but where eating aggravates, whereas under Anacardium eating *always temporarily relieves*. This is a sure guiding symptom. Anacardium has fixed ideas, hallucinations, a weakening of the moral fibre, with tendency to curse and swear, to explosive profanity, laughing at serious things, want of moral and religious sentiment, takes everything in bad part and becomes violent. He carries always a chip on his shoulder. He is the Dr. Jekyll and Mr. Hyde of the materia medica, because he brings to his conscious perception the two natures found in each of us, the two wills, one urging on to do things that the other forbids. Contrary mental indication at the same time; now he will—now he won't. The loss of memory; the difficulty in collecting the thoughts, the mental depression with the angry sensitiveness breaking out in swearing and violence, are the guiding mental symptoms.

Aurum is the remedy for melancholy due to *congestion*, especially when there occurs with it the suicidal tendency. The patient is *afraid of the slightest noise*. Sorrow and depression with desire for solitude, fear that he has lost the love and esteem of others, with great grief and weeping; religious anxiety, with longing for death and constant prayer. Burnett calls attention to its successful employment for pining boys who are low-spirited, lifeless, have weak memory, poor testicular development. In syphilitic patients with this mental depression, suicidal thoughts accompanying violent pain in the head, worse at night, with symptoms of exostosis of cranial bones. The homœopathic treatment of syphilis is at best a dreary desert, but Aurum in these conditions is a living oasis, offering brilliant and speedy help in this special line. We all know that despondency and satiety of life is frequently radically cured by the crude drug in bountiful dosage, as coin of the realm; it is equally certain that the homœopathic attenuation will do its appointed work when indicated.

As a representative of the animal kingdom our well-proven Lachesis easily takes precedence. It is particularly serviceable in the mental depressions which occur sometimes at the climacteric period. The patient is very *loquacious* and jumps from one subject to another in conversation. Hasty speech. The patient is nervous, sensitive, emotional, easily moved to tears, insanely jealous and depressed, especially sad in the morning, when all the symptoms of Lachesis are worse.

Restless and uneasy, does not desire to attend to business, wants to be off somewhere all the time—thinks there are robbers in the house and tries to escape, and fears being poisoned. Patient is always awakened by distress. I think it is the general experience of the school that the

best results are obtained from these remedies by the use of a *dosage* rather attenuated.

I believe the more systematic study of the mental and nervous symptoms of our *materia medica*, especially as they express and interpret the *temperamental* side of the action of our remedies, will do most for the practical working capacity of our special method of drug study and its application in disease.

CALCIUM AND ECLAMPSIA.—Some experiments undertaken by W. Blair Bell and Pantland Hicks on the physiology of the female genital organs, described in the *British Medical Journal*, February 27, 1909, have incited A. C. F. Halford, of Brisbane, to write on the subject of calcium metabolism in the *Australian Medical Gazette*, November 20, 1909. Halford notes that the chief results from the investigations described in our London contemporary prove that the phenomenon of menstruation bears a close relationship to the calcium content of the blood. Menstrual discharge is found to be very richly charged with calcium, and this excretion coincides with a marked fall in the calcium content of the blood. Further, when a woman becomes pregnant such excretion of calcium necessarily stops and the question arises, how is it employed in the pregnant state. The needs of the embryo in the earlier months will be but small, so that for a few months the mother's calcium content must continue high. In the later months, however, the fetus will draw largely on the calcium salts in the mother's blood for the building up of the skeletal structures, and it is when this demand reaches its height, in the seventh month and after, that symptoms of the preeclamptic stage occur.

According to Halford, the symptoms of low calcium content are identical in many ways with eclamptic phenomena. The most prevailing are edema of the extremities and loose cellular tissues, and convulsions. An exclusive milk dietary is a part of the treatment of this condition, and milk is rich in calcium. After labor calcium will again accumulate in the blood, but it takes three days to rise sufficiently to stimulate excretion by the mammary glands, and the function or site of calcium excretion being now transferred from the uterus to the breasts, the catamenial discharge remains in abeyance while lactation lasts. In short, the theory propounded is that eclamptic symptoms and eclampsia are due to the absence or comparative absence or lack of sufficient calcium in the blood, and conversely that it is essential to the pregnant woman in order to be free from eclampsia and from hemorrhage that the calcium content of the blood continue high.

Halford's treatment for eclampsia and eclamptic symptoms, as well as for the albuminuria of pregnancy, is by the administration of calcium salts in generous doses. He has treated a few cases in this manner and has averted eclampsia by following this procedure. Lactate of calcium has been the form employed both on account of its ready assimilable nature and because it is an organic compound. The dosage was 15 grains every four hours until symptoms abated, and then less frequently. The theory advanced by Halford and others reads as if it were based on sound premises. His experience in practice seems to have been satisfactory, and if a wider use of calcium in the treatment of eclampsia is

attended with beneficial results, a therapeutic remedy of very considerable value will have been unearthed. It may be stated that in dangerous cases of eclamptic convulsions the author recognizes that to give calcium by the mouth would be too slow a method, and such cases he recommends the injection intravenously of a liter of warm saline solution containing about ten grains of calcium lactate.—*Medical Record*.

FOREIGN LITERATURE

CONDUCTED BY E. FORNIAS, M. D.

CURE BY FRUITS.—It is strange that Cabanes, in his *Remedes d'Autrefois*, should not have mentioned the uses made of fruits by the Ancients. Even in our days the natives of South American countries employ as remedies a variety of fruits for gastro-intestinal troubles. The pulp of *tamarind* is taken in the West Indies as a refrigerant and laxative. The *papaya* (*carica papaya*) is prepared in Cuba in the open air, and given for digestive troubles; and the milky juice of the plant is regarded as *anthelmintic* in India and in Africa. In Cuba again, the water of the *coco-nut* is considered as diuretic, and employed as a drink in specific urethritis. The fruit of cashew (*maranon*) is also used in Cuba as an astringent in diarrhoea. And, *pineapple* is recommended in North and South America in throat affections, especially in exudative sore throat, herpetic or diphtheritic, and I have seen it prescribed as a palliative in angina pectoris.

The question of the medicinal value of fruits has been repeatedly agitated, and quite recently it has been resumed and discussed before the *Congres de Physiotherapie* of France. According to Dr. Linossier of Vichy, who reported the transactions of the Congress, the cure by fruits, without justifying the enthusiasm of certain of its supporters, does not deserve the indifference shown by the majority of the medical profession. It renders a genuine service in a great number of diverse affections.

Grapes, for instance, have been recommended in certain forms of dyspepsia, in constipation, in some chronic diarrhoeas, in numerous hepatic troubles (chronic congestion of the liver, biliary lithiasis, infectious icterus), as well as, in abdominal plethora, gout, gravel, and in certain dermatoses of arthritic origin. They have also been prescribed in chlorosis, in anemia, and even in the early stages of tuberculosis.

Strawberries have proved beneficial in gout and in certain forms of rheumatism. *Lemon juice* has also been extolled in diverse forms of rheumatism, but the acidity of this juice contraindicates it in dyspepsia, especially in hyperchlorhydria.

These cures can be easily undertaken at home. There are *rival stations* in various countries where the *cure* by *grapes* is systematically practised. There is, however, none in France, due to the fact that, at least in three-fourths of that country, there is not a village where this cure could not be undertaken at home. What would be the use, under these conditions, to impose to patients a sojourn in foreign lands? It has not been even demonstrated that *grapes*, at the moment they are cut, possess any par-

ticularly active properties, and that a cure effected with the transported fruit is in any way inferior to that made in the vineyard. Of course, we must always take into account the influence of exercise and of a sojourn in the open air. Physicians can undertake in any country cures by the use of fruits, and, as Dr. Linossier so properly says, "it is wrong not to consider more frequently this easy therapeutics, so agreeable and so devoid of danger." The medicinal agents are not only *grapes*, *strawberries* and *lemons*, but all sweet fruits, such as *oranges*, *apples*, *pears*, *raspberries*, etc.

The essential question is, *how do fruits act?* We know that the mechanism of their action is complex. In the first place, fruits, even when acid, make the blood alkaline and their employment in practice *constitutes an alkaline treatment*. This paradoxical action is due to the fact that the *acid tartrates, citrates and malates of potassium*, to which fruits owe their acidity, become decomposed in the organism and transformed in *alkaline carbonate of potassium*. In what then does an alkaline cure by means of fruits differ from an alkaline cure by bicarbonate of sodium, or mineral water?

The first difference is that the *mechanism of alkalization* is not the same. The *sodium bicarbonate* once introduced into the stomach, through the mouth, provokes an *abundant secretion of hydrochloric acid*. This hydrochloric acid is derived from the decomposition of the sodium chloride of the blood, and the extraction of this acid product is what renders the blood alkaline. It is an *alkalinization by subtraction*. In the case of fruits, their salts penetrate into the blood and burn, and by transforming themselves into carbonate give rise to an *alkalinization by addition*. The *potassium carbonate* produced in the very organism, probably owes to its nascent state a particular activity.

Another difference is that the alkaline metal in mineral water is *sodium*, while in fruits, is *potassium*. As the latter is above all fixed on the organic cells, and the former in the fluids of the body, one can well suppose that fruits are rather an *alkalinizing agent* of the cells, and mineral waters the *alkalinizing agent* of the interstitial fluids.

The *alkalinizing action of fruits* is, besides, more energetic than it is generally believed. Dr. Linossier has calculated that 1 kilo of *strawberries* introduces in the organism the same alkaline dose as 9 grammes of bicarbonate of soda, 1 kilo of *grapes* as 6 grammes, and 1 kilo of lemon juice as 4 grammes.

Moreover, *fruits are diuretic*, probably on account of the sugar and potassium salts they contain, and *uricolytic* by their salts of potassium (the urate of potassium is perceptibly more soluble than the urate of sodium). Fruits are laxative, undoubtedly on account of the alkaline salts and the cellulose they contain.

Fruits are besides excellent agents for the remineralization of the organism. Their ashes abundantly contain, excepting Sodium Chloride, all the elements of human ashes. They notably contain much iron and manganese, the metal indispensable for the functional working of the oxydases. They are also rich in potassium, which according to Traube, constitutes a cardiac tonic. All the substances mentioned are present in fruits in a *colloidal state*, which gives them different properties from those of the ordinary mineral substances.

On the other hand, the total absence of *Chloride of Sodium* in fruits, makes of them one of the best agents for the cure of dechloruration, even more so, since they increase the excretion of chlorides.

Finally, following the organization of the cure, we may be able to exert on nutrition a very variable influence: If *fruit* is the only alimentation a cure of alimentary reduction is effected, and especially a nitrogenous reduction, so beneficial in all arthritic manifestations. If to a normal alimentation we add very *sweet grapes*, a hydrocarbonous superalimentation and a reservation of nitrogen is provoked, and it is perhaps in this way that the *cure by grapes* is so effectual at the onset of tuberculosis.

Such are more or less the factors actually known about the action of fruits as remedies. We may conceive others, but we should bear in mind, however, that *crude fruits* contain substances insufficiently known, such as oxydases, peroxydases and hydrolysing diastases, to which we may be tempted to attribute some action —*Journal des Praticiens*.

MODERN IDEAS ON URIC ACID AND PURINS.—Dr. Fauvel gives first the definition of purins, and then he demonstrates their double origin, endogenous and exogenous. He insists upon the relation existing between purins and uric acid, and the need of nitrogenous equilibrium, and ends his proposition with the following practical conclusions:

"If the pathology of uric acid is still insufficiently known, and if we cannot apply to the sick all the valuable conclusions for the healthy, it is no less certain that any share of exogenous uric acid should be completely suppressed in all affections revealing the *uric acid diathesis*.

The alimentation without purins is the preferred regimen of uricemic patients.—Milk, cheese, butter, eggs, cereals and their derivatives (bread, biscuits, farina, pastry), fruits, vegetables, and, in general, all vegetable food, excepting leguminosæ, mushrooms and asparagus, offer varied elements for the composition of a regimen without purins, rationally adapted to the digestive power of each individual.

However, we should not forget that gouty patients can synthetically manufacture uric acid at the expense of the albumins and para-nucleins, and consequently it will be prudent to reduce, as much as possible the nitrogenous element of their ration.

Concerning the healthy individual, the reduction of alimentary purins always exert a favorable action on resistance to fatigue and on the yield of physical and intellectual work.

Nevertheless, in many cases, a regimen strictly without purins is not sufficiently exciting for an active man in good health and inferior to an ordinary vegetarian diet. The moderate use of tea, coffee, or chocolate seems more favorable than injurious to vegetarians enjoying good health, but it is not entirely proven that it is the same with a meat diet.—*Le Bulletin Medical*.

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CIMICIFUGA RACEMOSA.

BY

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I HAVE chosen as the topic for our talk this morning, the *cimicifuga racemosa*, the remedy that we prepare from the fresh black snake root and used either in the tincture or in dilutions prepared from the same.

I have chosen this remedy because The National Standard Dispensatory says that the employment of this remedy in medicine is, entirely empirical; its action upon man and the lower animals, bearing no relation to its uses as a remedy. This misstatement is an instance of "the presumption which comes of large combinations." It shows so well the urgent necessity for a more general recognition of the relationship of similarity between pharmaco-dynamic and therapeutic effects, and the establishment of a new rule for utilizing the results of pharmaco-dynamic study, that I believe we can talk about this remedy to some good purpose.

One of the most pronounced effects of the *cimicifuga* in the sphere of the mind is the production of a true melancholia. You will remember that I said that while the pathogenesis does not always show the pathology, it is often very suggestive. *Cimicifuga* produces a sensation as if a heavy black cloud had settled over the mind, enveloping the head, so that all was darkness and confusion of thought. The subject was suspicious, indifferent to her household cares, thought she was going crazy, feared death and feared that someone was trying to

poison her. Was utterly dejected and melancholy and could not sleep at all.

Now, let me tell you of an interesting occurrence reported by no less an eminent authority than Sir James Y. Simpson. A lady, he tells us, the mother of several children, had been upon two occasions, shortly after her confinements, subject to the most painful mental despondency.

In spite of the advice of several most eminent English physicians, this complaint each time, took a most long and tiresome course and terminated very gradually and slowly. At a subsequent period, it was arranged that Sir James should attend her, so she went to Edinburgh for that purpose. Her child was born and she returned home in good health. One month later she returned to Edinburgh and to Sir James, in the lowest possible state of mental depression, a perfect embodiment of mental misery and unhappiness. Sir James tried in every way to remove her cloud of gloom, but failed. Then he put her upon fifty drops of tincture of *cimicifuga* daily. On the third or fourth day of its use, she said the cloud of misery that had been darkening her existence, suddenly dissolved and disappeared, and in a day or two more, she felt perfectly herself again, in gayety, energy and spirits. She afterward told Sir James that she had prescribed the priceless remedy to more than one melancholic subject with success nearly as great as she had experienced in her own person. This description is so clear and so good that I have given it as Sir James recorded it. Fifty drops of the tincture a day, could not defeat the workings of that immutable law, the action of which depends upon the relationship of similarity. Sir James's experience has been confirmed in hundreds of instances with doses of the *ix* and higher as well as with doses of a few drops of the tincture. The lightening of the cloud of gloom was usually coincident with the production of tranquil sleep in place of sleeplessness, so that we may say that utter inability to sleep characterizes the melancholic states cured by *cimicifuga*.

Indeed, sleeplessness from any cause that produces nervous irritation seems strangely under the curative influence of *cimicifuga*, as you may prove by remembering the fact and trying it. Try it upon your nervously irritated teething infants, for example, in the ordinary dilutions. Try it on your nervous, depressed female patients. This is a general deduction from pharmaco-dynamics by the new rule.

But we must not fail to notice the peculiar delusions produced by *cimicifuga* in the mental sphere. These are simply its further evidences of irritation. Three adults received twenty or thirty drops of the tincture for rheumatism. The mental effect in each case was so strongly suggestive of delirium tremens that the attending physician taxed the patient in one instance with having imbibed too freely. These subjects, while perfectly sensible when addressed, had peculiar delusions. They saw strange objects within the room and upon their beds. They talked incessantly, inquiring, "Who is that man there?" "What does he want?" "Tell him to go home," and so on. They had the peculiar wild look and the expression of one suffering from alcoholism, with tremors and utter inability to sleep.

In several other instances there was distinctly produced the delusion that "rats, mice or insects were crawling about the bed, floor or ceiling." Surely, the suggestive resemblance between these effects and the common form of delirium met with in alcoholism, is very marked.

I feel rather sure that a physician of our school would not ignore the feature of such a fixed delusion as this, in making his prescription for a delirium whether it occurred in delirium tremens, in typhoid or otherwise. And such a distinct delusion in the pathogenesis of *cimicifuga* makes the remedy somewhat similar to such remedies as bell., hyoscyamus, stram., ars., opium, aethusa and calcarea.

Cimicifuga is accepted as a good remedy in delirium tremens by our school. You will find in Bartlett's treatment that it is considered as especially related to the fixed delusion of rats and mice, with incessant talking; just as our *cannabis indica* is related to the fixed hallucination in which objects appear larger than normal, and are seen at an unnatural distance, minutes appear like hours and so on. Philips, of London, says that it acts well in this affection, quickly removing the tremors, vertigo and hallucinations and inducing quiet and refreshing sleep. And Philips is not of our belief. Truly there *is* here once again a relationship of similarity to be seen by any one. I have not found it good always to pursue one's study of a remedy according to a fixed plan, such as following the remedy strictly through the pathogenetic scheme of Hahnemann. I like to take up any one of the spheres of its activity and study as I fancy. It is more pleasing and less fatiguing to the mind.

Therefore, I would next consider some of its effects upon muscular structures and upon nerves that are supplied to muscular structures.

No one will be likely to deny that *cimicifuga* has the power of producing irritation and pain in the larger muscular masses of the human body, and in the nerves supplied to such structures. Nevins, in Foster's *Encyclopaedia of Therapeutics*, makes the rather broad statement that "All forms of neuralgic and muscular pains, such as lumbago, pleurodynia, wry-neck, etc., when associated with a rheumatic history or with menstrual disorders, are pretty sure to be relieved by its administration." You will notice how nicely he confines his statements to its particular sphere of activity—the larger muscular masses and the nerves in them, making it clear that often the sources of the irritation must be reflex, a fact we especially confirm. The muscular and nerve pains are very often reflex from a disturbance produced by it in the other spheres of its activity. Now the fever-producing powers of *cimicifuga* are very limited and it does not show any special tendency to produce acute inflammation of serous sacs, like joints, with copious effusion like *bryonia* so we cannot claim for it theoretical efficacy in true acute rheumatic fever; but, when muscles and nerves are irritated seemingly through the nervous system or reflexly from other organs, then it is a really similar remedy as we shall see.

And I shall expect often to find associated with the severer forms of its myalgias, some febrile rise, yet I shall expect to be able generally to conclude that such fever as there may be, can be explained as a result of the suffering, and not primarily due to the fever producing powers of the drug. I do not yet know of a more generally efficacious remedy for ordinary lumbago, when that affection is simply an irritated state of the lumbar mass of muscles and the nerves in that region, attended by severe pain.

This has been the observation of many physicians of all schools. Now the pharmacodynamic effects of *cimicifuga* in the region to which we are referring, while perfectly plain and distinct, are nevertheless commonplace, and might be criticised as less useful in practice on that account. Yet I find some of my cases of lumbago, just as deficient in striking peculiar symptoms.

In some very excellent provings, we find that *cimicifuga*

causes a sensation in the lumbar muscles such as comes after severe muscular exertion. To my mind that is just as good a description as the explanatory one "that the back in the lumbar region, feels weak, weary and sore" for we have all known the feeling.

Then again, in these provings, we find that "the region from kidneys to sacrum feels lame and tired, and this is relieved by rest and aggravated by motion. A sensation of "heaviness and weight" is common, and may be felt in either "the small of the back," or may extend quite around the body in the lower regions known as lumbo-sacral.

Then there is a distinct tendency for the pain to extend downward through the hips and into the thighs, just as ordinary lumbago will do.

You may miss characteristic modalities in this description, but the fact that the subjects "must lie down, if they wish relief" is quite enough. What better relationship, in the direction of similarity could one ask? I do not believe that we would claim superiority for *cimicifuga* in the lumbago resulting from traumatism, in which muscular tissue has been actually torn as must often be the case. Here we need our *arnica*, *rhys* and even *bryonia*. Nevertheless, it is remarkable how useful *cimicifuga* low is in our ordinary cases of lumbago or myalgia with pains that are expressed in the minor keys of lameness, tiredness, stiffness, soreness and weakness.

Higher up the back we find produced useful effects. Under the scapulae, in the dorsal region extending from thence around to the sides of the chest under the mammae. These pains are most interesting in that they here become sharper, even lancinating. From this we conclude that it is now the nerves that are participating in the pain production. Singularly, the pain may focus in "one spot" just beneath the mammae. Now, I believe we all know that spot pain and tenderness is a feature of nerve irritation and inflammation. So you will see that the pathology is part myalgia and part pleurodynia. Then there is not infrequently tenderness along the spine and weakness felt as a sinking both in epigastrium and dorsal back.

Now, I have in my mind many women, whose occupations being sedentary and whose hours are long, suffer just in this way. They cannot sit long on account of these pains and must lie down for relief, so that they are incapacitated. We say they have spinal irritation and pleurodynia and so they have. Two

remedies are most efficient, *cimicifuga* and *ranunculus*. They are efficient solely on account of this relationship of similarity that we have been talking about. Strange but such affections are mostly left sided. So do these remedies affect the left side in this way. Many of these cases we say have the pain reflexly from disturbance in the uterine spheres. So are many of the musculo-nervous pains of *cimicifuga* reflex from its disturbances elsewhere. What a wonderful relationship, of similarity. And just to finish our notice of this particular sphere of action, let me refer to wry-neck so common a condition. Personally, I feel that I can usually master my ordinary cases of stiff neck with *lachnantes* medium and high dilutions. But *cimicifuga* is nearly as good a remedy. It produces cramping pain and stiffness in the muscles of the neck, sometimes in the nape, sometimes on one side, then on the other. All worse upon movement of the head. Indeed, the fixation of the head is so great that movement of the hands or arms increases the suffering.

There is something peculiar about the neck pains produced by *cimicifuga*. At times they appear to be in the muscles, again one thinks they are really occipital head pains, again they seem as if in the vertebral articulations. Still I think we shall restrict our use of these remedies to those cases in which the muscles are involved, and the fixation simply due to the spasm produced by the pain. I hardly think we shall use them for those more serious neuroses or for cases due to organic lesions in nervous structures.

Next, I would study briefly some of the effects of *cimicifuga* in the sphere of the generative organs.

One thing is conclusively established, namely, that *cimicifuga* produces uterine contractions. And it is, to my mind, remarkable that the contractions produced, are so much like the normal uterine contractions. They are not at all like the persistent, continuous tonic uterine contraction caused by ergot. They are intermittent like the normal uterine contractions.

We all know that it is dangerous practice to give ergot while the child is still in the uterus. It will probably cause coma or asphyxiation, because of the continuous pressure exerted upon the cord. Ergot used according to the old rule, must be restricted in its application to states of uterine inertia after labor or to hemorrhages from smaller vessels due to want of tonicity in these vessels. And thus used ergot at once

shows that same relationship of similarity, because we know that uterine inertia and lack of tone is the sequence of and follows its primary action of producing firm, continuous uterine contractions.

Now, in *cimicifuga* as well, you shall have uterine atony following its primary effects of natural uterine contractions, if you keep it up long enough. Some one may ask: "Why not give *cimicifuga* instead of ergot to produce natural uterine contractions when such are desired?" There is no reason why it should not be so used, if you desire to experiment with it according to the old rule. It is always an experiment when you use drugs that way. This has often been done. The first families of America, at that period when you could have purchased the site of our present city hall for a jack knife, used it to accelerate labor, and it did its work. They used it for atonic, weak uterine muscles that had become exhausted. Hence, they used it because of this same relationship of similarity. They made a tea of it.

But according to our new rule, you may use *cimicifuga* to quiet uterine contractions, and to relieve uterine pains, when you don't care to have these because they are doing harm. Here its use is entirely because of the relationship of similarity, and as you are prescribing for the purpose of removing symptoms similar to its primary pharmacodynamic effects, you have to reduce your dose to one of the dilutions.

For instance:—In the early months of pregnancy, if there be frequent or almost constant uterine pains very similar in their regular recurrence to labor pains, and the woman is much depressed about them for fear they will cause her to lose the foetus, and she cannot sleep on account of them, we may cure them, that is, stop them with *cimicifuga* in dilution. We may also do this with *viburnum* and with other remedies.

Of course, the wise doctor looks to it that there is no mechanical factor, such as a malposition of the gravid uterus in his case, for *cimicifuga* will not lift the fundus out of the hollow of the sacrum, neither will it put it there.

Again: After labor is over should the uterine contractions persist a long time, and hurt like sharp neuralgic pains and contractions will hurt a sore muscle; and the woman cannot sleep and becomes low spirited and nervous, you can put them to sleep and make the contractions easier and more normal by giving a dilution of *cimicifuga*. It is just like *chamomilla* here,

the long continued "after-pains" hurt the woman so much and she cannot bear them. If the after pain is a true neuralgia that shoots down the limbs from the uterine region, we can easily stop that with our xanthoxylum. Our old teacher, Prof. O. B. Gause, used the prickly ash very often for neuralgic after pains. You will hardly ever catch a homœopath giving a hypodermic of morphia to quiet excessive after pains. He laughs at that sort of treatment, because it is not good for his patient or not as good as some other remedial measures, suggested by the new rule.

Ringer and Philips and Potter and Nevins and Hare and others speak of the usefulness of *cimicifuga* in obstinate headaches occurring in nervous women about the time of menstruation or caused by strain of the eyes by overstudy. Therefore, I should next notice briefly the effects of *cimicifuga* in the sphere of the head and incidentally the eyes.

There is no medicine or drug more likely to *cause* a tremendous headache than this same *cimicifuga*. Anyone who is "from Missouri" need only take the tincture awhile to find this out.

He will decide as did the provers, first that it causes a real congestive headache, for his head will feel full, as if the brain was too large for it and he will have to go into the cool air to get relief. There will be an outward pressure then as from fullness within the skull.

Next, he will know that it affects the eyeballs, producing unusually severe soreness and aching in them. Indeed, the soreness and painfulness of the eyeballs or just between the ball and the orbital plate is an almost constant feature of its headaches. And the eyes get red and congested. Now we surely would see some resemblance, some relation of similarity between the sore eyeballs, the red eyes, the pain that shoots from the eyes into the vertex and occiput and the ordinary headache from strain of the eyes in overstudy.

I have used *cimicifuga* very much in my ordinary headaches termed "menstrual" by patients. Frontal with the sore eyeballs, occipital with the tired neck and upper spinal region, full, as if there was too much in the head, all worse a few days before or at beginning of the menstrual flow and relieved more certainly by the fresh air, than anything else.

The relationship of similarity is perfect to a great many "menstrual headaches."

Now, if you wish to do so, you can use remedies according to the new rule in a very simple manner, without in any measure fatiguing the mind. You can give *cimicifuga* for the melancholia of the puerperal period. You can use it for lumbago, for pleurodynia and wry-neck. You can use it to facilitate labor or to prevent miscarriage. You can give it for headaches recurring at each menstrual period. Reflex headaches from uterine irritation, or from eye strain. Many physicians do this.

Or, if you are ambitious to get much out of the relationship of similarity and out of the new rule, you can use remedies in a different way. That is, instead of prescribing upon the indications of a similarity that is general, that is commonplace; you can establish in each case a very close and specific relationship between the pathogenesis of a certain remedy and the morbid picture of a certain case, by the means known as the Repertory. This is the practice of those men who ask full returns for labor expended and efforts made—and they get it.

A CLINICAL METHOD FOR THE IDENTIFICATION OF SUGARS IN URINE.*

BY

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WHEN, by the use of the copper tests a doubtful reaction occurs, viz., a slight yellowish or greenish-yellow turbidity only after much urine, relatively speaking, has been added or not until the mixture cools, the question asked is always the following: "Is it dextrose (glucose)?" If the previous history of the patient is unmistakably that of diabetes mellitus no further consideration of the condition is really necessary, but if no previous history of diabetes can be obtained, the question is one of much importance. The author uses the Einhorn saccharimeter in doubtful cases as follows: 10 c. c. of the suspected urine are boiled, cooled, one gramme of washed yeast added and the whole, after stirring, poured into the Einhorn instrument, and allowed to stand together with a com-

* Advance sheets from the writer's forthcoming book on Urine Analysis.

panion tube containing the same yeast and normal urine until the next day in a warm room. Absence of fermentation excludes dextrose, levulose and galactose and probably laiose indirectly, and points to lactose, glycuronates, pentoses, maltose, isomaltose, excess of normal constituents, presence of alkapton bodies, or extraneous substances as the original cause of the reduction of the copper test.

If the patient is a lactating woman the substance is in all probability *lactose*, dextrose being excluded by the absence of fermentation. The original urine may be tested with the mucic acid test (positive) and Barfoed's test (negative). Rubner's test may also be tried, but a negative result with it does not exclude lactose, so far as the writer's experience goes. If the patient has been taking drugs like chloral, or if chemicals as chloroform have been added to preserve the urine the reduction is probably due to *glycuronates* in which case the simplest procedure is to obtain another sample from which the drugs or chemicals are excluded and to test again, a negative result confirming the suspicion of presence of glycuronates on the previous occasions; or the copper-reducing urine can be tested with B. Tollens' naphtho-resorcin test for glycuronates as per directions in Chapter. XII.** If lactose and glycuronates are absent and, especially, if the copper solution is reduced *suddenly* as the urine cools, suspect presence of *pentoses*, particularly if the patient has been eating heartily of cherries, plums, or other fruits or partaking of fruit juices or drinking beer freely. If pentoses are present Nylander's test gives a grayish precipitate, and Bial's test gives a green color immediately after boiling.

Maltose occurs chiefly in diabetes mellitus, hence is of no clinical importance when this disease is unmistakably present. A doubtful reaction with the copper tests in a case of malignant tumor or of pancreatic disease may possibly be due to it. If thought necessary to identify it, its osazone with phenylhydrazine should be precipitated, when the microscope will show yellowish, coarse sheaves rather than the finer needles seen in the case of other sugars and the melting point of the crystals (about 16 degrees C. lower than dextrosazone) may serve to identify them. Maltose is dextrorotatory.

Isomaltose forms an osazone with phenylhydrazine show-

** Referring to the new work on Urine.

ing very fine crystals which melt between 150 degrees and 153 degrees C. (302 degrees and 307 degrees F.) Isomaltose is dextrorotatory.

Alkapton by virtue of its homogentisic acid reduces the copper tests. Urine containing alkapton may be easily recognized by the disappearing dark green color yielded with ferric chloride solution, and by the writer's test (brown foam and brown color given when floated on the solution of hypobromite used for the urea determination). Such urine blackens from above downward when exposed to the air and also on addition of alkalies.

In the absence of identification of the above-named constituents, the presence of *accidental constituents* is to be suspected. To be sure of this, information must be had of the previous contents of the bottle in which the urine was supplied. If this bottle had previously contained foods, drugs, chemicals or perfumery, the chances are that the reduction was due to a small portion of these substances left over. Test tubes used for tests where acetic acid has been employed, if not well-cleaned, may be responsible for the reduction since even one drop of 20 per cent. acetic acid will cause a turbidity when boiled with one fluidrachm of Harnes' solution.

When now fermentation is positive, shown by a decided lowering of the fluid in Einhorn's instrument in the case of the suspected urine, while at the same time there is none in the companion tube holding normal urine, the presence of dextrose, levulose or galactose is to be inferred, together with the possibility of laiose as a concomitant.

If the patient is a nursing infant it is of great importance to identify *galactose* for fear of a mistake in the diagnosis. To identify galactose, the original urine is tested with E. Tollen's phloroglucin test, and also the mucic acid test, both of which differentiate it from dextrose.

If galactose is absent, the remaining sugars are dextrose, levulose and laiose. Polarization is the best method for differentiating dextrose from levulose, but since this procedure is beyond the reach of the general practitioner, the writer advises the alimentary test; cause the patient on an empty stomach, preferably at noon, to eat a carbohydrate luncheon including a quarter of a pound or more of cheap candy or glucose syrup. Test the urine voided two hours or more after luncheon for dextrose with the copper test and a marked posi-

tive result indicates that the patient is intolerant of dextrose, hence the inference is that the original urine of the previous occasion contained dextrose. If no result is obtained by feeding as above, repeat the experiment on another day. If the result is still negative, try on another day feeding with 100 grammes (one-quarter pound) or more of levulose which can be obtained of E. H. Sargent & Co. and other dealers in chemicals. A positive reaction with the copper tests under such circumstances indicates levulosuria and points to the liver as the seat of the trouble.

Laiose is found only so far as known in diabetes mellitus, hence the identification of it for clinical purposes appears at present to be unnecessary. Its presence is to be suspected when in the absence of a Seliwanoff reaction tritration gives higher figures than polarization.

If the various sugars, including lactose, glycuronates, and pentoses are absent, the reduction of the copper solution in the absence of fermentation, alkapton, and extraneous substances is likely to be due to excess of *urinary normal constituents*. In such cases the urine is practically always *scanty* in amount and of increased color and specific gravity. This reduction by normal constituents (coloring matter, uric acid, etc.), is fairly common in cases when either the day urine is small in volume compared with the night or vice versa. *The reduction occurs in the case of the smaller volume of urine, but not in the larger.* If Haines' solution is employed, it will usually, in such a case, require eight to ten drops of the urine to precipitate the cuprous oxide and perhaps then only after cooling when the precipitate slowly forms. Cause the patient to drink freely of water, test his 24 hours' urine, and absence of the reduction points to excess of normal constituents in the previous test.

A NON-IRRITATING DEPILATORY.—Depilatories containing the sulphides of barium, strontium and calcium and an inactive substance like chalk, talc or starch are extremely irritating to the skin. This can be avoided by preparing them *hot*, says J. Lutje, in the *Journal de Pharmacie et de Chimie*. To prepare such mixtures 1.5 grams of strontium, or an equivalent quantity of barium or calcium sulphide, are triturated with 2 grams of starch and 8 grams of water and the mixture heated to boiling, with continuous stirring. Upon cooling, a creamy mixture is obtained, which is as efficacious as the mixture prepared in the cold and does not hurt the skin.—*Med. Brief.*

THE PHYSICAL SANCTITY OF MATRIMONY.

BY

C. E. FISHER, M. D., CHICAGO, ILL.

COMMENSURATE with the day when Adam went gallivanting about the Garden of Eden hunting Eve and that Maiden Blush apple that has caused so much trouble, there have been sorrows in the matrimonial field.

These sorrows have been psychical and physical. With the temperamental griefs we have at present nothing to do. But with the physical heart-rendings there is a whole lot that the medical profession may well make it its business to look after.

From the very day of that memorable Fall the spiritual world has been trying to prevent or limit the hunting of unripe fruit, clothing the delicate and delightful physical relations between the sexes with the mantle of "God's Holy Ordinance of Matrimony." That this has been a wise treatment of the subject, in so far as it has been carried is beyond dispute. The legal and Church restraints that have been built up around Adamic debauchery have had a wholesome social influence. Without them society would be but a rotten fester. No one should attempt to say them "Nay!"

But, there is a debauchery that is worse in its effects upon the human race, and more destroying to human happiness and welfare, than that of the strictly Adamic variety, and, unfortunately, despite our boasted civilization, thus far neither Law nor Religion has done very much toward correcting this deplorable woe. This form of debauchery is of the physical type, in contra-distinction to purely sexual indulgence. Young men and maidens may violate all the laws of sanctity as these relate to the observance of the Fourth Commandment, and may violate all the laws of the statutes as they relate to chastity, decency and sexual morality, and yet not do half the harm to themselves, their souls or their progeny that is being daily done while yet conforming to all the laws of the State and Church.

"God's Holy Ordinance of Matrimony" is all too often but the "Open Sesame" to the sorest kind of physical infliction. It sounds fine and looks well in print. But no brilliant church wedding, no matter how sweet toned the bells nor how digni-

fied the preacher, can ever atone for a legalized or a sanctified syphilis. No man of God, no matter how solemn his benediction as the bride and groom kneel before the altar before an admiring and sympathetic multitude can ever make good for the awful iniquity of a transmitted sexual infection committed in the name of the Church. Nor can any county official ever atone for the legal crime the statutes empower him to commit when he issues a license to a tenderloin rake to marry one of those innocent girls who make up the daughters of our best families, as the newspapers delight to chronicle the innocent martyrs of our marriage system. What an horrible travesty upon both Law and Church when almost from the initial night of her honeymoon the innocent bride of to-day frequently becomes a helpless invalid for life, due to the debauchery of her spouse in the tenderloin section while yet, perhaps, he was visiting her and solemnly plighting his troth!

The "Red Plague" in various forms abounds wherever our alleged civilization has made its way. It abounded to a more limited degree before the day of either the Napoleonic code or of Blackstone's rock-ribbed law. It will probably abide with us for centuries to come, or until the medical profession, upon whose shoulders rests a mighty responsibility in this line, shall have done its full duty toward educating the pulpit, the press and the people to a true sense of their moral debt in connection with the subject of matrimony from its purely physical side.

They sound nice, those beautiful words, "Whom God hath joined together let no man put asunder!" 'Tis a platitude of the most beatific perspective. What would the world do without it! The divorce courts would quickly multiply as do grasshoppers in the stubblefield, until all other court business would be overwhelmed by the volume of work which the new tribunals would be called upon to perform. But, what would the good brother of the long frock say about it were he to issue his clerical pronouncement in the case of his own lovely daughter and within a few weeks find her hopelessly diseased with one of the infections of the tenderloin section? With her 'tis the Patrick Henry cry of "Give me Liberty or give me Death!" Her father gave her away for better or for worse. She got the worst of it with pitiful alacrity. Must she bear that worst through all the years of a miserable life, with an infected spouse who haughtily defends his iniquities because their cause

is sanctioned by law and by custom and because his doctor, perhaps, told him he was cured and it was safe for him to marry?

Better a thousand more divorce courts, if need be, than that our innocent girls, who have a right to expect protection from the Law, the Church and the Physician, shall have to suffer lives of torture, distress, infection and re-infection with men who may have meant all right when they took these brides to their bosoms, but who should never have been allowed to enter the sacred hall of the right Matrimony.

Before a strictly medical audience any student of the subject could bring an array of facts that would wring the heart of even the most obdurate human iconoclast. Before a mixed audience these illustrations are too repellant, too severe. But it is within the sphere of the medical writer or speaker to set the public to thinking—a duty too long neglected and which should no longer be permitted to pass unobserved. Very much has been heard in late years about the "Great White Plague," the world is now aroused and doing splendid work toward its eradication. Somewhat more delicate is the subject under consideration, but not one whit more necessary is the contest that is being waged against tuberculosis than is it that a like contest shall be systematically begun to save our sons and daughters from the awful ravages of the "Great Red Plague."

Here, again, the Medical Profession must become a great educational force. Who shall preach the gospel of the physical sanctity of matrimony if not the medical men? The preacher can take care of the spiritual side of the subject, while the County Clerk can issue the licenses and rake in the fees. Both have their functions, which should be rather enlarged than curtailed. Both might well be liberally broadened until in a measure these functionaries will be found encroaching upon the physical side of the topic, also, to the betterment of the contracting couple and the future of their offspring.

But to the Medical Profession, who study these things as they should be studied, from the historical, scientific and preventive points of view; to those who see the physical iniquities of life, but who are too often lenient, almost to a censurable degree, in advising marriage to many a subject who is known not to be fit for the bonds; to this profession is laid the duty of throwing physical safeguards around this sacred relation between man and woman, for the honor of the wicked and the

benefit of the innocent, until the public shall have become thoroughly aroused upon the iniquity, and its manifest evils shall have been in good measure or completely removed.

Refer, for instance; to the blander red light disorder, the one which some young men, and some older ones, too, say they "would about as soon have as to have a common cold." Since the microscope and culture tube became the chief diagnostic weapons of the doctor, since he began the making of diagnoses by looking into the blood and tissues of folks instead of being satisfied with looking at them, it has become known that the invisible germs of this supposedly innocent disorder love to perform their daily gambols in the cerebro-spinal fluid and in other vital liquids of the human system. In the lubricating membrane of the knee-joint the microscope has calculated as many as fifteen millions of gonorrhoeal germs in that little pouch alone. They are self-propagating, self-perpetuating, as it were, and once they find lodgement in a favorable medium of this character there is no telling the deviltry they are capable of. It takes all the gunning, by all the ammunition the medical man has devised, with all the gatling hypodermics and other instruments of torture at his command, to wage a successful warfare against this kind of an invisible enemy, and just when he thinks victory is at hand, and when the victim thinks he has about squandered all the money he will have to spend to get rid of the ill-effects of his one night in the tenderloin, the enemy seeks a new field and its manifestations break out in a new place and in new form. It is a subtle foe, capable of the direst consequences. By many a competent authority it is now held that the blander sexual disorder is the harder to cure. An enumeration of the ailments it is capable of causing would startle the average layman. Incurable basal headache, violent neuralgia, insufferable joint ailments, deforming rheumatism, destructive pleurisies, various suppurative diseases of the nobler organs of the body, unnamable infections of unnamable internal structures, high tension nervous disturbances, deplorable and destructive melancholies, oftentimes without the remotest mental connection between cause and effect, have inflicted intolerable suffering for ages upon subjects and their offspring who were without the "Original Sin" in the first instance.

For the greater disorder of the "Red Plague" it is not possible to speak in public with a plainness that would have to be

used to do the subject exact justice. It is enough to make the statement, from the purely physical side of the topic, that no young man—for men are the chief offenders—should be allowed a license to marry any young and virtuous maiden, or any old and virtuous one, for that matter, until he shall have shown the license clerk a clean bill of health. And no priest or preacher should have the right to do violence to “God’s Holy Ordinance of Matrimony” by uniting in wedlock any man or woman who does not present a certificate of freedom, absolute freedom, of evidences of any private disease, and, more than this, freedom from all traces of germ habitation, whereby he may infect his bride with microscopic destroyers of whose presence in his system he himself can have no knowledge.

Just what such a bill of health will have to be to be effective and satisfactory will be a matter of deep and conscientious consideration. Doctor, preacher, lawmaker and layman should be joined in the making of such a measure. Naturally, frequenters of the tenderloin sections will raise the cry of “Medical Trust.” But what if they do? Better a medical trust, if such has to be, which is not at all necessary and the veriest bugaboo, than an undertakers’ trust to bury the poor victims of the licentiate’s destroying! Let the lambs of the green pastures, with the blood of iniquity trailing them through the dens of infamy which are their delight, raise all the hullabaloo they will and cry as loud as they may about their “personal liberty” being interfered with. It ought to be interfered with with a vengeance, and the sooner the people of this country burn all such men of straw and get down to the legitimate business of protecting their homes and daughters the better will it be for the world and the sooner will all such sophistries be relegated to the background, where they belong.

A wise concentration of the brains of honest men will easily evolve an enactment at once a credit to the statutes and a protection to the public. Our innocent daughters and sisters have a right to expect protection from us, and as voters and lawmakers we have no right to withhold it. No longer should such protection be denied. These are presumed to be the days of civilization, enlightenment and advance. But in these important matters little has been done of a systematic nature and in a concentrated way over centuries of time. The “Physical

Sanctity of Matrimony" deserves our earnest consideration, and it deserves it now.

Nor does the contention relate to the red plague alone. No man and no woman should be allowed to marry or be given in marriage who is infected with tuberculosis in transmissible degree. It may even be well to go farther, and refuse the license to anyone whose ancestry shows physical evidence of involvement in any constitutional tubercular process. This would deny marriage to thousands who now receive the license freely. It might work a great many individual hardships and distressing privations. But did we pay one-tenth the attention to the mating of our sons and daughters and our neighbors' sons and daughters that we do to our cattle and swine all ancestral defects would be eliminated from the possibilities. The glitter of the engagement ring, the glamour of the ceremony, the brilliancy of the event, the eclat of the occasion, the notices in the newspapers, the general interest which the union of two young souls always arouses, these are so seductive and pleasing that on we drift, without the slightest effort upon the part of the contracting parties or their protecting kinsmen, to learn from their medical advisers and from other sources the physical status of the pair. Little do we know whether we are initiating our daughters into a beautiful life of happy and successful wedlock or are opening to them, with our free consent, the great brass doors of red light suffering and degradation, or are plunging them into the torture-abyss of a consumptive sanitarium. Perhaps the woes of incurable cancer are their future, perhaps there lies in one or the other of the principals to all this glitter the pedigree of deformity, the seeds of insanity, the dyscrasia of incurable skin disease or deeper seated disorders that will cost years of suffering and the degradation of hopeless deformities upon souls as yet not conceived.

Hardly does the wage worker of to-day, in all too many instances, set off to his shop the day after his marriage but that his earnings are already morally mortgaged to the care of a wife who is to be a burden to his purse even though she be a solace to his home while yet her health remains. Has he no safety in this sacred union, and have we not the right to look after him? Likewise, the happy girls who are to-day in school, have they no care from us? Whither are we drifting physically, if all the woes of humanity are to be cast in the grab-bag

of matrimony that he who wishes to reach therein and draw what he may, whether a prize or a blank, may do so?

It may be of interest to know that a few States in this Union have already put upon their statutes enactments requiring physical certificates before licenses shall be issued. Indiana and Minnesota lead in this wise action. For present purposes their laws are not required. They form a good basis for farther enactments. The working out of the problem will take time and thought. No haphazard evil can be corrected by haphazard corrective. That the evil exists no one can gainsay. It is for the public to correct it. It is for the medical profession to educate and arouse the public. It is for the press and the pulpit to second our every endeavor. In fact, all the forces for human up-lift and the betterment of the race, individually and collectively, may well be arrayed as one solid force for the good of humanity through the channel of "The Physical Sanctity of Matrimony." And speed the day when no man or no woman shall be married or given in marriage who is not a fit subject to make a physically decent but a physically helpful husband and wife, and whose offspring shall be guaranteed in the license at least a moderate and reasonable physical chance in the world.

THE RODMAN OPERATION FOR REMOVAL OF CANCER OF THE BREAST.

BY

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DURING the past year and a half I have removed sixteen cancers of the breast by the Rodman method, and because of the rational ideas incorporated in this operation and the excellent results following it, I deem it worthy of recommendation at this time. The operation has been called, by its originator, (and with some right and reason), "the bloodless method of breast amputation." If this were the only "drawing card" possessed by this operation it would lay claim to our attention, for the usual methods of breast ablation are notoriously bloody. The Rodman operation, however, is more complete, more radical, more sweeping in its removal of diseased tissue and infected lymphatics than even the Halsted operation.

The bloodless idea is carried out by first making an incision

just below and parallel with the groove between the deltoid muscle and clavicular portion of the pectoralis major, deepening this incision until it transversely divides both pectoral muscles near their insertions. Now, at once, the branches of the axillary artery, the tributaries of the axillary vein, the axillary nodes and fat, are all exposed. The vessels are next divided between forceps and the infected nodes are removed. This



FIG. 1. RODMAN OPERATION; SUTURES REMOVED.

first step deals with and controls nearly the entire circulation of the mammary gland: the small superior thoracic artery sometimes, and the anterior perforating branches of the second, third and fourth intercostal arteries always, must be secured after they are cut. By attacking the breast in this way hemorrhage is reduced to a minimum.

Another strong point in favor of the Rodman operation is in its removal of integument, axillary contents, muscles and fascia and the cancerous breast en masse, without exposing or cutting into the malignant disease and, as it has been put, liber-

ating cancer cells to contaminate the wound and reinfect the patient.

After dealing with the axilla as just outlined, an incision is carried around the sternal side of the breast, beginning at the middle of the first-made incision and, sweeping wide of the gland and its disease, it extends downward beyond the costal border over the rectus muscle. Another incision is placed to the outer side, beginning at the outer end of the first incision



FIG. 2. RODMAN OPERATION 10 DAYS PREVIOUS; SUTURES REMOVED; TENSION-RELIEF CUTS HEALED.

and terminating at the same point below the costal border. These incisions extend low enough on the anterior thoracic wall to enable the operator to remove the lymphatic-laden fascia over the rectus abdominis and external oblique muscles. In fact, the incisions are so directed as to permit the operator to reach and remove all fascia surrounding the breast that is capable of malignant infection,—that covering the sternal origin of the opposite pectoralis major, that over the serratus magnus

and latissimus dorsi laterally, as well as the fascia of the rectus abdominis and external oblique.

Rodman insists, and rightly, upon free and extensive undermining, or undercutting, and the free removal of skin in fashioning the wound, thus getting rid of a greater quantity of fascia and dangerous superficial lymphatics and, at the same time, increasing the mobility of the flaps. This will lessen the tension upon the tissues and permit an easier approximation

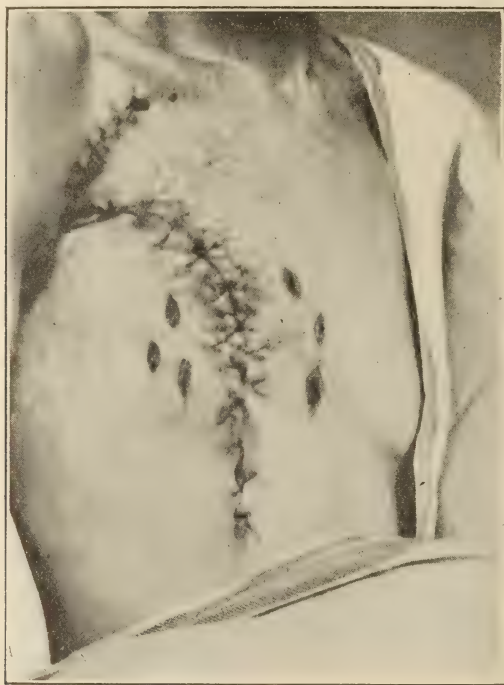


FIG. 3. ONE WEEK AFTER RODMAN OPERATION; SILK SUTURES NOT YET REMOVED. PRIMARY UNION OF WOUND.

of the sides of the wound. To still further relieve tension it has been my habit to make tension-relief cuts (seen in my illustrations) which are of the greatest value in saving the middle, tightly stretched part of the wound. These incisions should include the entire thickness of the skin.

This operation, as previously stated, is a so-called complete one, even more complete than the Warren or Halsted method of breast amputation. And yet the surgical shock following

its performance is not one bit greater, and it does not require a longer time than the others. My best and usual time necessary for the operation is fifty minutes. I have never had a case suffer seriously from operation shock. All of the wounds in my sixteen cases have healed promptly and perfectly (as illustrated) except one, and the ultimate functional results as to strength and mobility of arm and shoulder have been the best. The one case that did not heal well was a thin, neurotic woman, with a family history of insanity, and who developed paranoia immediately after her operation. She is now an inmate of the Friends' Asylum, Philadelphia.

It may be true, as statistically published, that the radical breast operation of to-day provides greater immunity against recurrence, or, better, postpones the time of recurrence longer, than radical operation upon cancer of the lip, stomach, or uterus, but that is poor encouragement for us to rest on our laurels in the treatment of malignant disease of the female breast, for it is true that no method for the extirpation of this disease is too radical. The older, the more extensive the disease, necessarily the more radical and complete the operation required, and the less confidence can be placed in a permanent cure. My greatest disappointment has been; not in local recurrence, but in internal metastases, the operation scar and the axilla remaining perfectly free from evidence of the old disease. This would go to prove that while "the operation was successful," the patient ultimately died from the same disease and, after all, in our reasoning, we are narrowed down to this one fact: the case was not operated upon early enough.

BLOOD PRESSURE DURING THE MENSTRUAL AND INTERMENSTRUAL PERIODS. —Tsuji, in Doederlein's clinic, has found that the blood pressure in women varies from 126 to 135 mm. and is mostly about 128 to 130 mm. It varies slightly according to the time of day. There is usually a slight increase in the afternoon. Up to forty years of age the blood pressure does not seem to be influenced by age, but after that time it is higher. Blood pressure seems to be independent of the character of the genital disease, but in other diseases like anaemia it is lower, and in heart disease is higher. During menstruation the blood pressure falls, the decrease amounting to 15 to 20 mm. It is lowest on the second day of menstruation. Age seems to have no influence, and neither has the amount of menstrual pain experienced. The fall of blood pressure may be referred to a vaso-motor influence. The loss of blood and the variation in the chemical constitution may also have some effect.—*Arch. f. Gyn.* Vol. 89, 517.

THE SIGNIFICANCE OF BLOOD PRESSURE.

BY

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(Read before the Homœopathic Society of Allegheny Co., Pitts., Sept. 28, 1910.)

SOME three hundred years ago the fact that the blood circulates was established by Harvey. About one hundred years later came Hale's demonstration of blood pressure, but it was yet another hundred years before an accurate study was begun. In 1828 Poiseuille, a Frenchman, introduced a U-shaped mercury manometer which made possible careful observations. Next came Ludwig, a German, in 1847, with his kymographion which was an important contribution because it gave a permanent and graphic record. In 1855, however, came the sphygmograph and with it the first attempt to measure human blood pressure. Long before that, of course, "the hard" and "the soft" pulse had been recognized even away back in ancient Chinese medical history, but since 1855 clinical men have set about assigning to pulse tension a quantitative value comparable to the reading of the thermometer. And yet it was not until a few years ago, in 1896, that a sphygmomanometer was introduced complying with the essential requirements for general use by physicians, namely, reasonable accuracy, freedom from subjective errors, ease of application and portability. Heretofore, the exact instrument had been cumbersome; the light, compact ones made many errors. In 1896 the technical difficulties were overcome by Riva-Rocci, an Italian and Hill, an Englishman, who devised a rubber bag to encircle the arm and inflated it with a rubber bulb or pump. This was covered by a non-stretching leather cuff, snugly fitted and when the bag is filled with air, pressure is exerted everywhere at right angles to the surface of the arm compressing the brachial artery equally from three sides against the bone.

At present we have several reliable instruments: The Erlanger is accurate, expensive, heavy, and suited to office work. The Faught is portable and costs but \$20.00. The Stanton, a modified Riva-Rocci, is also a good instrument, has a heavy base; suitable to office work. The Janeway tends to spill the mercury but is light to carry. The Riva-Rocci instrument,

Cook's modification, is lowest in price, \$8.50, very simple, and satisfactory if the rubber tubing is kept closely fitted. With any of these instruments use a cuff at least 10 or 12 cm. wide; otherwise a narrow cuff will give readings too high, which was a mistake made by early observers.

To take the blood pressure have the subject in a recumbent position, snugly fit the cuff to the arm on a level with the heart, inflate with air bulb until the pulse at the wrist disappears. Just as the pulse returns note the height of the mercury column which is the maximal or systolic pressure. Gradually let the air out of the escape valve until the point of greatest oscillation of the mercury is noted—this gives the minimal or diastolic pressure. Another method is to place the stethoscope over the brachial artery near the elbow and inflate as before. As the air escapes the return of the blood stream is heard as a murmur—this is the maximal or systolic pressure. As the air further escapes the murmur heard at each pulsation suddenly grows fainter and disappears—this point gives the minimal or diastolic pressure. It is well to confirm the first reading by a repetition. The whole procedure may be done in five minutes. The significance of blood pressure in a particular case will depend largely upon the observer's acquaintance with the physiological and pathological causes for variation.

During the past few years a great deal of work has been done in the study of blood pressure and the newer books on the heart and diagnosis have chapters on this subject so that blood pressure studies are growing more definite in their values. In our own city, Dr. Barach has done notable work. He has studied a series of 81 cases in typhoid fever, together with a review of 500 cases; another year he studied the effect of severe exertion in 55 cases; while he has in contemplation another series to determine the physical condition of the ordinary business man—the man in middle life, who should be examined especially in view of the marked increase in arteriosclerosis. For data and reference, and from which I have drawn freely, I wish also to mention the studies of Cook and Briggs, Crile, Cushing, Janeway's book on Blood Pressure, Hirschfelder on the Heart, Faught on Laboratory Diagnosis, Tigerstedt's Physiology, also the observations of Crampton Sargent and McCurdy.

The technique of taking the blood pressure is readily learned and to the careful observer it yields accurate and definite in-

formation. If any one thinks his *tactus eruditus* is exact in a case of pulse tension it is easy to convince one's self of his error. Every man can recognize fever in his patient but not a single physician would willingly give up his thermometer. So with pulse tension—objective determination is almost a necessity to a proper understanding of certain types of disease, and with other diseases and conditions, especially the chronic office patient, the blood pressure chart will give us considerable aid. Janeway says: "The intelligent physician can no more afford to dispense with the sphygmomanometer in the study of certain types of disease than he could discard the thermometer in typhoid fever. . . . Sphygmomanometry hasn't the wide range of applicability nor the importance of thermometry, but that its routine use is a necessity for the educated and conscientious practitioner, seems proven."

In the study of blood pressure the following factors should be kept in mind: The heart force, which acts as an intermittent pump, forcing a volume of incompressible liquid—the blood—into the system of elastic tubes where resistance is encountered both in the periphery where the tubes grow exceedingly small—the arterioles—as well as in the tone of the larger vessels, which tone is controlled by the action of the vasomotor nerves. The center is in the medulla with additional subsidiary centers in the cord, probably in the sympathetic ganglia. Of these vasomotor nerves the splanchnics are the most important because they control the splanchnic veins. These are the vasoconstrictor nerves and if one be cut blood pressure falls in the dog 30 to 50 mm. and if the second one be cut there is an additional fall of 10 mm. After such section Ash found that in about two weeks the vasomotor tone was partially regained. However, if the dog be hung in the vertical position and the cord cut severing both splanchnic nerves blood pressure falls to zero and death ensues. But if the abdomen be squeezed the blood pressure can be kept at normal. Further, it was found that if a rabbit were suspended vertically death ensued from a fall of blood pressure but if the rabbit had a tight abdominal band or else were hung head down no inconvenience resulted. Also Von Besold found that by stimulation of the cut cervical cord blood pressure rose to seven times its normal height. Peripheral irritation, therefore, produces a rise in blood pressure, but over-stimulation produces shock, while excessive stimulation collapse. The effect of pain and trauma are thus

translated in terms of blood pressure. Sphincter dilatation, vaginal examination, handling of the intestines all show the effect of peripheral irritation—first in a rise of blood pressure and later in shock symptoms if the trauma be continued. This reflex irritation as manifested by splanchnic vaso-motor constriction and then paralysis should be kept in mind. The importance of the splanchnics in controlling blood pressure is of recent recognition—it hasn't yet reached the textbook stage—but that the splanchnics are potent is indicated by the fact that their excitation produces a greater rise in blood pressure than by clipping the thoracic aorta; conversely, failure of splanchnic vaso-constriction means death. Recent work of Romberg and Pässler indicates that death in diphtheria and pneumonia is due, not to heart failure, but to vasomotor paralysis and that such patients may be saved by vaso-constricting therapy instead of heart stimulants. Splanchnic capacity also affects blood pressure. Tigerstedt points out that the heart output, its volume, depends upon the amount of blood available in the big veins. Therefore, anything increasing the amount of available blood causes a rise in blood pressure, such as massage, abdominal constriction, certain exercises, because they constrict the splanchnic area; conversely a warm bath, warmth and rest in bed, relaxation of fatigue and some diseases produce a fall in blood pressure.

The systolic or maximal pressure represents the highest pressure in the aorta. The diastolic or minimal pressure represents the peripheral resistance; that is, the pressure in the arterioles is about the same as the blood pressure in the aorta at its lowest pressure. The pulse-pressure is the difference between the maximal and minimal pressures. In aortic insufficiency the pulse pressure varies most—from 100 to 120 instead of the usual 30 to 40 mm. difference between the systolic and diastolic readings. Such a finding points to the diagnosis. Blood pressure varies from a number of causes, some physiological, some pathological. Under the former head mental and emotional excitement produce a rise, also posture, meals, exercise and sensory stimulation. Blood pressure gradually increases with age and ranges in the adult from 100 to 140 mm. (mercury) normally. Pathological variations are due to disease, drugs, poisoning, especially asphyxia. The pathological range is wide—anywhere from 40 to 400; 70 is dangerously low and 180 is dangerously high although not necessarily fatal. Dr.

Barach says that a departure of 25 mm. from the normal, according to the age of the individual, he looks upon as an indication of disease. In CO_2 asphyxia the steps by which the blood pressure varies are most interesting and illuminating, especially when applied to the interpretation of the phenomena and symptoms of a case of failing compensation. At first the CO_2 increases blood pressure by stimulating the vaso-constrictor centers but the pulse is slowed because of the stimulation of the inhibitory cardiac center. Secondly, as the asphyxia continues the slowing of the pulse exceeds the vaso-constriction and then the blood pressure falls. Thirdly, this condition slows the circulation and CO_2 accumulates and again stimulates constriction, and in spite of vagus inhibition the pulse action quickens and pressure rises. This condition alternates until the heart gives out and then both the blood pressure and the heart rate falls and death ensues unless respiration is promptly restored. In view of the mechanism which determines these changes having so many factors it will be seen that the causal factor may not be affected by merely resorting to a therapeutic measure which alters blood pressure. It is, therefore necessary to investigate (1) the condition of the blood as to aeration, (2) the functioning power of the kidneys, (3) the strength of the heart beat, (4) and the working efficiency of the vaso-motor system, before attempting to regulate blood pressure.

Blood pressure tests are being used to indicate physical fitness, and I am inclined to believe that the physical directors have adopted a laboratory method that in turn we can apply to chronic cases or to the person who doesn't feel "right." If the physical director can apply the blood pressure test to a candidate for a race and thereby determine his fitness then it can be applied to interpret the physical condition of patients. Personally, I have been surprised to find in my own observations, some fifty, how many of the patients have given a poor reaction to the vasomotor-efficiency test. The test was elaborated by C. Ward Crampton and consists of a comparison of the systolic blood pressure and the rate of the heart in the recumbent position with the systolic blood pressure and rate of the heart standing up. In the normal person the blood pressure rises slightly and the pulse rate also under such a test. Now, if the blood pressure falls over 5 mm. and the heart is markedly accelerated the test indicates that the subject is in poor condition.

For the purpose of grading subjects the following scale card is used:

BLOOD PRESSURE						
INCREASE			DECREASE			
INCREASE IN HEART RATE	5	+10	+5	0	-5	-10
	A	B	C	D	E	F
	12	B	C	D	E	F
	20	C	D	E	F	G
	28	D	E	F	G	H
	35	E	F	G	H	I

Interpreting this scale: With an increase of blood pressure of 10 mm. if occurring with a slight pulse acceleration, say 5 beats, the grade A is given; if accompanied by an acceleration of 35 beats the grade E is given. If the pressure drops 5 mm. and the pulse rate is increased 20 the grade F is given. A, B or C indicate a good condition; below C is poor. This test is an attempt to register the working efficiency of the vasomotor system. As you know, when a person lies down the blood flows with equal readiness to all parts of the body, including the brain; when the person stands the force of gravity tends to drain the blood into the large splanchnic veins which can hold nearly all the blood of the body. This tendency must be overcome by an increase in the tension of the blood vessels, and in the healthy individual there is such an action of the vaso-constrictors to increase blood pressure when the upright position is assumed, and with little or no acceleration of the pulse. In the weak or fatigued person there is not only little or no rise but often a fall of pressure and at the same time an acceleration of the pulse. Here the vasomotor system is out of order. During the Boston Marathon race, Dr. McCurdy tried the blood pressure test on the Indian runner Longboat and pronounced the Indian out of condition. His trainer said that Dr. McCurdy might know about a white man but that he was no judge of an Indian and sent the Indian out to pace five miles to show him off. At the end of two miles the Indian played out and his blood pressure was so low it couldn't be taken standing. The Indian was put to bed and kept there until the time of the race when he had recovered his tone so well that he won in record time (*June Outing*.) This test will not detect organic unsoundness and a number of men criticize it, but Dr. Crampton asserts that it records with accuracy the integrity of the vasomotor system. It is a test of vigor and is not meant to supplant the stethoscope. In view of this test, which is re-

cent and must be tried out before being fully accepted it is rather interesting to note in Dr. Barach's 24 cases tested for the Pittsburg Marathon race out of the first ten an analysis shows every one gave a good test regarding his vasomotor system, and out of the tail-enders, eight showed poor condition of the vasomotor system as indicated by this scale.

The various diseases are classed either as high or low tension. Under high tension there are the following: 1. Nephritis, especially the chronic forms; uremia; maximal pressure range, 160 to 220 mm. 2. Arteriosclerosis, maximal 150 to 170 with rather slow pulse. 3. Lead; high as in arteriosclerosis. 4. Aortic insufficiency, maximal 160 to 220, minimal 60 to 140, characteristic wide pulse pressure. 5. Chronic hypertrophy as in athletes, excessive smokers, compensated heart lesions, maximal 140 to 160. 6. Conditions associated with increased pressure in the cranial cavity—meningitis, apoplexy, fracture, cerebral thrombosis, intracranial hemorrhage, rapidly growing brain tumors, uremia with effusion; maximal pressure 200 to 400 mm. The blood pressure rises,—by anemia of vasomotor centers which brings a tremendous vaso-constriction and an action of the augmentor fibers in increasing strength of heart beat,—until the mean pressure exceeds the intracranial pressure. Here the rise of pressure expresses the need of the brain for blood. Indications are for surgical interference, per Cushing—raise a skull flap to relieve intracranial tension. To counter with nitrites or venesection simply increases the task of the heart. Atropine to paralyze the vagi and quicken the heart is suggested. 7. Epilepsy; pressure falls a few minutes after; differentiates uremia. 8. Vascular crises, tabes, angina, lightning pains, due to vaso-constriction, produce rise in blood pressure. 9. Melancholia (varies). 10. End of pregnancy and onset of labor, increased blood pressure. 11. Chronic primary polycythemia—the increased number of red blood corpuscles increase the viscosity of the blood and thereby the work of the heart, besides arteriosclerosis is usually associated. 12. Cyanosis in heart failure, with broken compensation, which occurs at some stage in most failing hearts. The blood becomes loaded with CO_2 and vaso-constriction plus augmentation results as in asphyxia. Usually the pulse is quickened, more work is thrown on the crippled heart—just the opposite from what is desired (this quickening probably results from vagus fatigue); therefore, this is of clinical importance be-

cause the increased blood pressure accelerates heart failure. Here nitrites, venesection, digitalis—anything which hurries the velocity of the blood flow through the lungs brings about improvement in CO_2 and lowers blood pressure.

Low pulse tension is frequently associated with heart disease but this is not the usual case. In fact it is just the reverse. A low blood pressure is commonly an index of failure of the vasomotor center rather than the heart. The low pressure diseases are: 1. Acute infectious diseases (except meningitis), especially typhoid and peritonitis where a dilatation of abdominal vessels and arterioles produces low pressure. Barach reports maximal pressure in typhoid as low as 65, about 100 is more common. In a recent case of my own 92 was reached. The long rest in bed may have considerable to do with the low pressure. 2. Tuberculosis—all ranges are found, often 90 to 105, with this a rapid pulse, 80 to 100 beats, is common. A gradual rise in blood pressure indicates improvement. High pressure in tuberculosis is often associated with hemorrhages. 3. Shock—Crile has shown that in surgical shock from injury and pain there is loss of tonic activity of the vasomotor centers exactly as in typhoid. Fainting from emotional excitement (overstimulation through peripheral nerves) is of similar origin. Crile uses a double-walled rubber suit upon shock patients, using air pressure to compensate for loss of vascular tone. 4. Collapse from carbolic acid, arsenic, phosphorus or acetanilid poisoning is due to vaso-constrictor failure and likewise has low pressure. 5. Extensive hemorrhage (normal salt solution for relief). 6. Diarrhoea, choleraic attacks, profuse vomiting. 7. Pleurisy. 8. Pericarditis, acute cardiac disease; quickened heart action prevents accumulation of CO_2 so the asphyxial rise doesn't occur. 10. Chronic wasting diseases, cancer, anemia, diabetes, give low blood pressure with an increased heart rate (chronic toxemia).

Ether produces a rise in blood tension, never hypotension unless shock or cardiac failure. In Blaud's 100 cases, 79 gave a rise in blood pressure, 9 no change and 2 had a real fall due to hemorrhage or excessive sweating. Chloroform, on the other hand, lowers tension and the explanation of its safe record in obstetrics is due to the fact that tension is normally high during labor. Ether safety is also explained by its effect on blood pressure.

To sum up, first, by far the most valuable results have been

found in hypertension—nephritis, arteriosclerosis and intracranial cases. Secondly, the sphygmomanometer tells us more of peripheral resistance and vasomotor efficiency than of the heart. But by intelligent interpretation we can get much help from blood pressure readings especially when compared with the heart rate plus the stethoscope. Fourthly, a permanent rise in blood pressure indicates some damage to the regulating power of the visceral circulation. Lastly, blood pressure tests, the so-called functional tests, will be of aid to us in our chronic cases where we desire to estimate their progress, where we desire to estimate the amount of damage done to the general vitality when produced by hidden disease or course of life, or where we desire to make a comparative estimate of the patient's progress under a special course of treatment, or to test the value of our remedies.

THE VALUE OF REST IN THE TREATMENT OF MEDICAL DISEASES.

BY

CLARENCE BARTLETT, M. D., PHILADELPHIA.

(Read before the Germantown Medical Club.)

It is nearly fifty years ago since Hilton delivered the lectures on Rest and Pain. These were shortly afterwards published in book form. A second edition was printed in this country as a part of the 1879 series of Wood's Library of Standard Medical Authors, and at once became so popular that copies of the work in second-hand book stores commanded a high premium. For a number of years they were not to be had at any price. Within recent years they have been republished, and are still deservedly popular as a medical classic. As the subject of rest was handled by Hilton it related solely to surgical affections. Its precepts have been scrupulously followed by surgeons unto this day.

The medical man likewise admits the value of rest in the management of the class of cases coming under his supervision, but unfortunately, his appreciation of its value is too often theoretical, and not practical, if one is to judge by the number of cases which are permitted to go about when they should be at rest.

For the purposes of this paper, we will look upon the term rest as a very elastic one, having a value as adapted to the special cases in which rest is indicated. For purposes of discussion, I shall take up its application to a number of individual diseases, my remarks being based upon personal experiences.

First, let us take typhoid fever, the greatest of the febrile disorders, the management of which brings out all that is good and bad in the physician. Much has been said of the dietetic and hygienic management of patients with this disease, but the question of rest is too often ignored. Personal experience has led me to believe that the mortality of this disease would fall below one per cent. if all patients were sent to bed on the first or second day of the disease. In every fatal case seen by me in private, consultation, and hospital practice, the patient had been permitted to go about, *i. e.*, had not been sent to bed, for several days. Severe cases that had gone to bed early invariably pulled through. Hence it is that I would place promptness with which absolute rest in bed is ordered as a very important item in the prognosis of typhoid.

The mistake of delay usually arises from neglect of a very simple precaution, namely the taking of the patient's temperature. We have all erred, and can confess to one another. I have had patients call for some apparently trivial complaint, and have passed the illness off as some slight indefinable indisposition. Improvement not following as expected a more searching examination discovers a fever, a temperature of something over 100 F. and thereupon the patient is ordered to go home and to bed. Two or three days might have been saved had a proper examination been made in the first place.

When rest is ordered for the typhoid, we are by no means alert as to the details with which it must be enforced. Of course, we order the patient to bed; but our duty does not stop here. First, in addition, there is the personality of the physician, which of itself must be such as to inspire rest by his mere entrance and presence in the sick room; a manner that will reassure the patient and keep his mind easy as to the ultimate result. Then next comes the nurse, by all means the most important item in the management of the case. If the family cannot afford a nurse, then we have to consider a proper party to look after the patient. Such are very few, indeed. The majority of persons who make claims for nurs-

ing honors are nothing more than benevolent nuisances. Fussy in the extreme, they remind one very much of the person who, when mending a piece of china, goes to it every few minutes to learn if the fragments are adhering properly. Third, comes the regular and systematic use of the bed pan; and last, but by no means least, is sleep, which, under no circumstances, should be disturbed.

Personal observation has taught me that a very large minority of typhoid patients obtain the rest they should during the early days of their illness. Home nursing, though well intentioned, lacks the technical skill of the trained hospital variety. The bed pan is neglected, and the bedding is not given the attention it should have.

What I have said of typhoid fever applies with equal force to the management of all other disorders.

The question of rest of the intestines through dietetic management while germane to the subject matter of this paper, is too large a subject for consideration at the present time, especially in view of the fact that within recent years many and varied have been the teachings pertaining thereto. It should prove interesting to have the views of my hearers in the discussion which, it is hoped, will follow this paper.

Within the past decade much has been said of the sanitarium treatment of tuberculosis, by which is meant the proper adaptation of rest, feeding and the open air life to the case of illness on hand. Unfortunately too much attention has been paid the latter two to the neglect of the former, which is certainly of equal importance, and without which the most judicious feeding and the entire time spent in the open air is utterly valueless. Pulmonary tuberculosis, of course, is not to be treated by an absolute rest treatment, but the patients suffering therefrom must have the rest they need. In other words, we must regulate the proportion of rest and exercise systematically for each individual case. Our decisions must be based upon the physical strength of the patient, his temperature, the character and frequency of his pulse, and the influence of exercise in which he has already indulged. Early cases in which physical signs are few, and but slight, fever absent, pulse of good quality and of normal frequency, may be permitted to follow their own inclinations, providing such are not in the direction of a too strenuous activity. Following such a life, they should be watched most closely, espec-

ially as to the influence of the exercise on the temperature and pulse frequency. Any exercise that disturbs these to any extent greater than normal must be considered as too severe, and must be interdicted in the future. The majority of cases, even in the beginning require absolute rest for the first two to four weeks. During this period, cough should cease, fever disappear, and the pulse rate drop to about normal. Then exertion may be permitted, but only of the gentlest character. It must be measured from day to day. With the slightest aggravation of symptoms, the patient should be ordered to desist.

While on this subject, I will speak of the importance of rest in haemoptysis. At first thought, my hearers will say: "Of course, such patients cannot be treated in any other way." This is the theory, but in practice how different! I speak with full knowledge gained in obtaining careful histories of my patients. Too often, indeed, the poor sufferer stops in to see his doctor, and then goes to business. Fortunate, indeed, is the one whose haemorrhage is sufficiently great to make his stay in bed mandatory. Again, when such cases are ordered to bed, they are kept there too short a time. An ulcerated lung should not be expected to heal any quicker than an ulcerated foot, and should be given at least an equal chance. Certainly ten days to two weeks under the most favorable circumstances are too little a time allowance. Incidentally may be mentioned the importance of securing rest for the lung by well ventilated sick room, the cessation of coughing, and regulation of diet and social surroundings.

Chorea is one of the diseases of childhood in which physicians almost invariably advise exercise—advice which is opposed to the dictates of common sense if one but considers the possible sequellae of the disease, namely organic cardiac changes. This possibility of itself should lead to enforcement of rest, if not, at least the restriction of exercise. Those who have given these cases the rest treatment are thoroughly satisfied with its advantages over the plan too commonly dictated by adherence to traditional lines.

In acute arthritic fever with complicating endocarditis, it is a wise plan to insist upon a prolonged period of absolute rest in bed though the patient be without any symptoms. Experience has taught me that it is a very difficult thing to insist upon this, as patients can see but little utility of it under such

circumstances. Too often we yield to moral cowardice, lest we get the reputation of being alarmists. Do we not all admit the wisdom of this plan? Have we not all seen cases of incurable valvular lesion,—incurable even to the extent of restoration of compensation—due to lack of enforcement of principles of rest?

Much interest has been paid to the various cardiac tonics. Valuable as these are, they are really unnecessary in a very large proportion of cases if proper rest be enforced when compensation begins to break. The common error in practice is to keep these patients on their feet by the administration of digitalis, strophanthus, etc., thus keeping a damaged organ at work,—if, indeed, we do not make the damaged organ a jaded organ as well. It is in keeping with the principles of rest that we oftentimes find morphia invaluable in cardiac cases. Many times have I seen a properly indicated and administered dose or two of morphia mark the turning point between death and life.

It is probably in chronic myocarditis that rest is most important, and it is probably in patients with this disease that we encounter our greatest difficulties in enforcing a proper mode of life. No matter what may be the age of the patient, rest in bed is necessary for some time, usually for a month at the lowest calculation. Usually we find that the patient suffers so little that he delays consultation with a physician until his case is well nigh hopeless. A good example of this was my "Man of Mystery," to quote the headlines of the newspapers of the day. He walked in my office with a pulse of 160 but without any symptom other than slight praecordial distress. It was with the greatest difficulty that he consented to go to the hospital at once. He begged hard for a couple of days to settle his affairs. But I still insisted. His heart sounds were scarcely audible. The cause of the illness was believed to be undue exertion in a railroad wreck. After one month's sojourn in the hospital, his pulse was 72 and increased but slightly on mild exertion. In another two weeks he was permitted to go to Camden, Maine, in company with a physician. He did well for another month, when disregard of instructions led to relapse and speedy death.

Quite recently my friend Dr. Witte, of Trenton, N. J., referred me a very similar though much less severe case. This patient was urged to undergo a rest treatment and accepted.

He begged the privilege of finishing up certain contracts, but finally yielded the point. On his return home, he forgot all his promises. He died within a week.

As opposed to these tragic cases, may be cited numerous others which have obeyed instructions, and still survive in fairly good health, and leading a happy and useful existence. The man who acknowledges the superior knowledge of his physician and accepts his advice philosophically, is well repaid for it in the end.

The great difficulty in inculcating the importance of rest in myocardial cases to physicians has originated in the numerous advocates of gymnastic systems. Thus Romberg, Fraentzel and others condemn the rest treatment of myocardial degenerations, insisting that cases show a downward tendency when rigid rest is enforced. While not denying the existence of such instances, I have never met with them in patients to whom I considered the rest cure adapted. There are persons whose temperaments will not permit them to rest. They may be physically quiet, but mentally they continue energetic and chafe under restraint. With these, one must act diplomatically, and in most instances, our efforts will be crowned with success. In some the reading of a friendly riot act, in others good talk will exert a psychic effect which will quiet the hitherto restless and rebellious temperament.

Then there are cases which have progressed so far that nothing is of avail. The rest treatment should not be blamed for the bad results.

Finally there comes a time with all cases at which rest ceases to be beneficial, and the patient must be about. To continue rest beyond this period will certainly cause the loss of all that has been gained.

Part of the objection to the rest treatment of myocardial disease is based upon the value of fresh air as a restorative. This can be overcome very readily by having the patient take his rest in a room with open windows, or, if he resides in the rural districts, on a porch.

I really believe that the advocates of the exercise treatment of chronic myocarditis cannot have in mind the severe cases to which I have reference, for it is inconceivable to me that such patients can survive more than a few weeks if permitted to go about. Certainly they are not the subjects for the Oertel system of calisthenics, for I have seen them made worse there-

ly. Many of them are not sufficiently strong to undergo the fatigues of an ocean voyage and a trip on the other side to the sanitarium of some authority on this or that particular system. Cases to which I have reference could never undertake such journeys safely.

Many years ago, in conversation with Dr. Goodno, I asked his ideas as to the treatment of gonorrhoea. He replied that he believed the clapp patient should be sent to bed, but that such treatment was not practical. The remark was, however, impressed indelibly on my memory, though never tried in practice. But in probably half a dozen cases where clapp patients have been compelled to go to bed for other causes; I have been surprised at the rapid disappearance of the urethral symptoms.

Very few recognize the importance of rest in chronic parenchymatous nephritis. Many have been the experiences in which the albumin has been found all but absent in the morning, while the reaction was pronounced at night. In acute parenchymatous nephritis it is the rule for the albuminuria to continue for many months after the disappearance of all symptoms, and it is almost as frequent to find such patients up and about within a week after symptoms have disappeared. These patients constitute probably the class over which I have had the greatest difficulty in obtaining control, probably because aggravations from indiscretions do not subject them to inconvenience.

My remarks have already taken up as much time as the rules of this society permit. I would that I could say more for the subject is of endless importance. Whatever may be the case under treatment, the problem of rest usually enters into it in one way or another. The old doctrines demanding exercise in chlorosis, for example, must give way to an opposite plan. Constipation, which, it is true, is due in many instances to a sedentary life, is occasionally dependent upon a too strenuous existence for the strength of that particular individual. In the various types of neuritis, we have local rest looming up as the main stay of the treatment. Finally, we have the question of rest in the management of gastric disorders, and especially cases of gastric ulcer.

SIMILIA SIMILIBUS CURENTUR.
THE COMPARATIVE METHOD OF STUDYING THE ACTION OF DRUGS.
AN ILLUSTRATIVE STUDY.

BY

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(Read before the Homœopathic Medical Society of the County of Philadelphia.)

IN presenting for publication the following article, I particularly wish to avoid any controversy as to the essential merits of Hahnemann's hypothesis, of a general relationship of similarity existing between diseases and the poisonous effects of the drugs by which they are cured. For present purposes, I beg to assume that such a relationship does exist. My desire here is to call attention to the very exacting demands of his famous working-formula, based upon that hypothetical conception of the relationship which drugs bear to diseases; to point out the inadequacy of the older methods of teaching to present requirements; and to illustrate, by a fragmentary study of the pathogenetic action of Barium Chloride upon the circulation, the Comparative Method of Studying the Action of Drugs, as a method better adapted to the requirements of modern physicians, and more truly applicable to Hahnemann's recommendation than the older didactic method of teaching Pharmacodynamics. It will be obvious, at a glance, that this study is incomplete. It does not claim to be more than a "fragmentary study" to suggest the possibilities of a method for systematic and consecutive study of the effects of any drug which might be chosen.

Having been one of that certain type of the homœopathic physician who, after considerable investigation, became convinced of the scientific reasonableness of Hahnemann's famous formula *before* entering upon my medical studies, I have been much puzzled at times *since* college days to explain the utter lack of confidence and apparent inconsistency of many of the younger physicians who are nominally homœopathic and potentially scientific.

At this point, I wish to make it clear that I do not consider the *average* practitioner to-day one whit less serious in his purpose to strike the "rock bottom" of medical problems than his forebears, nor, on the other hand, do I regard him as

especially favored in latent intellectual capacity to do so. But, the single fact remains, that few of *the men who are using drugs daily* are systematically engaged in studying the drugs which they use. There are good reasons for depending less upon drugs as therapeutic agents than formerly. But, there is a moral and a scientific obligation upon any physician *who prescribes drugs at all* for sick human beings to use them guardedly and intelligently.

The striking differences of opinion between the various groups of homœopathic physicians, theoretically committed to the same principles and practice, are more apparent than essential. They are not fundamentally technical. While the lack of unanimity among the "leaders" is disconcerting to the younger recruits, it is not necessarily an unhealthy sign, and need not be taken too seriously, so long as it does not spring from purely personal causes. In fact, technical "differences" are very welcome, as a change, to those physicians who take their profession seriously and are far more concerned in determining the practical efficiency of a scientific hypothesis than they are in the petty political "differences" which inevitably arise from conflicting personal ambitions. In our own little family there has been a wearisome amount of unscientific controversy about "mongrels" on the one hand, and "pure Homœopaths" on the other, and real technical differences have been lost sight of amid bitter personal animosities.

I sincerely trust that my contribution may be of real suggestive interest to that body of homœopathic physicians, who, long convinced of the reasonableness of the principles of Hahnemann, are rightly dissatisfied with the results of much that is generically called homœopathic practice.

During the past few years of its evolution, medical education in all departments has been passing rapidly through a transitional phase of far-reaching significance. The trend now is distinctly away from authoritative didactic lectures, as in the past, toward a method of pure experiment conducted by careful "studies" in research laboratories and at the bed-side. The younger generation of homœopathic physicians has felt the impulse of this tendency. Like other scientific physicians we have come to regard all knowledge as but relative to-day, and the very idea of a final or authoritative pronouncement upon any subject of scientific importance is an anachronism.

The spirit of modern investigation refuses to consider any man "an authority" upon a given subject; but, is quite willing to accord him all honor due him as an advanced student in his particular department of learning. Therefore, the contributions of those eminently qualified by intrinsic merit find a place in the existing knowledge of the time, as scientific rules for acquiring facts, or concise symbolic phrases for condensing them into working formulae, instead of the polished rhetorical dissertations from "recognized authorities" as formerly.

In the experimental method and "reasoning from analogy" or comparison, pre-eminently, as in many of his facts, Hahnemann was a notable pioneer in the spirit of modern medicine, and only the unfortunate intolerance of his time obscured the merit of his genius.

We may aptly say of him, as has been said of others by one of the foremost students of medical education of our day,— "We may admire Virchow, we may venerate the memory of Pasteur, but we shall act best if we do as they did and preserve only those ideas and theories which agree with the collective state of knowledge in our time. Non-submission to his authority is, in a sense, one of the highest tributes succeeding generations of scientific medical men can pay to the memory of a medical genius."

The Comparative Method of Studying the Action of Drugs is a method based upon a "reasoning from analogy." It is a method eminently scientific. It was the method adopted and emphasized by Hahnemann.

On April 14, 1810, in the publication of the *Organon of the Healing Art*, Hahnemann pointed out the necessity for drawing the strictest analogies between the effects of poisons accidentally introduced into human organisms, which we may here call accidental pathogeneses, and that other class of poisonous effects producible by drugs, which we may call intentional pathogeneses, for our present purposes. He condensed the substance of his recommendation to his contemporaries into a concise working-formula, *Similia Similibus Curentur*, couched in subjunctive Latin, a custom not uncommon to the time among scientific men. Since that time certain of his over-zealous admirers have ascribed to that famous formula the attributes of a divine law, all-comprehensive and immutable throughout the ages, which a beneficent Providence

once saw fit to hand down to a learned German Moses, to be forever afterwards the singular privilege of those who might see fit to make themselves his chief beneficiaries. This advanced position has often reflected ridicule upon the more modest souls of us, who have some serious doubts about Hahnemann's "special dispensation," but who have a growing admiration for his scientific attainments and a just satisfaction in working along the lines he suggested.

As a working formula, *Similia Similibus Curentur* can mean no more and no less to-day than it meant one hundred years ago. Its value, as a therapeutic guide, now as then must depend upon the fidelity with which we conform to its exacting requirements. But, that much of the data then acquired by its guidance could be accurate to-day in the light of our later knowledge is too incredible for serious consideration.

Nevertheless, in spite of these disqualifications, subsequent study has served to emphasize the necessity for more exact analogies between the two elements of the comparison. In my opinion, the keen precision of Hahnemann's reasoning was in nothing shown more clearly than in his insistence upon *human* provings for *human* medicines. In modern research work in the natural history of diseases for therapeutic agents our prospects for encouragement or disappointment seem to bear a direct relationship to our ability to closely approximate the human species in the subjects used for experiment. I would refer, by way of illustration of this point, to the work upon Yellow Fever, Spinal Meningitis and Syphilis.

Now, curiously enough, while the *principles* underlying homœopathy have become the more firmly established by later knowledge, homœopathic and non-homœopathic *methods* of studying drug action have become almost reversed, since April 14, 1810. Non-homœopathic pharmacology has come to be studied in laboratories and clinics chiefly, like general medicine; while homœopathic pharmacodynamics, strictly experimental, continues to be proclaimed in didactic lectures. What a strange irony Fate had in store for that great pharmacologist, who scarcely a century ago, forfeited an enviable prestige as a "regular practitioner" to a *method* of "pure experiment."

The fact that *the methods* employed in studying these two classes of pathogeneses are so different, has alone made much

of the data accumulated through years of patient effort unintelligible to physicians recently trained. A man who has been trained to experiment, to analyze, and to compare, in general medicine, is ill-prepared to listen, to memorize, and to be content with compilations of vague and disconnected symptoms, which have been neither undergirded with a modern structural pathology nor scrutinized by a critical psychological analysis. A different *method*, not a different purpose, has made many homœopathic physicians strangers to each other, technically.

To make the homœopathic principles more convincing and its practice more effective among the younger members of the profession, we will have to address ourselves seriously to the big task of revising and verifying our pathogeneses by modern methods. As in clinical medicine, we will have to carry our studies, first, down into the laboratories of animal experimentation for a foundation upon sound structural pathology, possible in this way alone; then, up to the bed-sides of *healthy human provers* for a pure subjective pathogenesis, which shall continue to be as Hahnemann foresaw, a positive *sine qua non* for a rational drug therapeutics for sick human beings. To comply with the exacting requirements of Hahnemann's rule we will have to base our comparisons upon a fundamental structural similarity and not upon a merely superficial symptomatic resemblance between disease processes and drug pathogeneses. In short, unless, we can *parallel at every point* our investigations into the processes of diseases by systematic and correlated experimental studies with drugs upon animals, first, and then upon healthy human beings, our analogies will be of little value for therapeutic application according to Hahnemann's recommendation.

When the necessity for detailed studies *on parallel lines* shall have been generally conceded, the economic obstacles to erecting and maintaining properly equipped laboratories and clinical wards for the purpose will be overcome.

As a method, The Comparative Method of Studying the Action of Drugs, is scientific and flexible. It lends itself readily to detailed studies of particular phases of the similarities between the effects of diseases and of drugs, without necessitating the memorizing of long lists of disconnected and irrelevant symptoms. It makes practicable a systematic and continuous revision and verification of our *materia medica* to

make it square with "the collective state of knowledge" of any time, through which it may be therapeutically applicable.

By way of illustration, let me present a fragmentary study of one "relationship of similarity" which may be traced between the pathogenetic effect of Barium Chloride (*Baryta muriatica*) and the Moenckeberg type of Arteriosclerosis. This illustration is made possible through the studies of Dr. Klotz, formerly of McGill University, who kindly sent me reprints of his work upon experimental arterio-sclerosis. As will be noticed at once, this comparison is fundamental, but incomplete, for therapeutic purposes, according to Hahnemann's recommendation, without the very essential complement to be derived from further "provings" upon *healthy human beings*.

**PATHOGENESIS OF
ARTERIO-SCLEROSIS.**
(Moenckeberg.)

STRUCTURAL PATHOLOGY.

Essential Action:

"A fatty degeneration of the muscle and elastic tissue of the media," going on to:

- a. Small pouchings, (aneurysms).
- b. Calcification, of the radials, etc.
- c. A secondary intimal thickening (occasionally).
- d. Fatty degeneration of the (hypertrophied) heart.

Distribution:

- a. Aorta—thoracic and abdominal.
- b. Arteries—peripheral, and later,
- c. heart—(hypertrophied) fatty degeneration.

["Arterial degeneration may in one person be more advanced in the brain, in another in the kidneys, in another in the limbs, in another in the heart."]

FUNCTIONAL PATHOLOGY.

When "more advanced" in the heart.

["The degree of exhaustion of Contractility determines the nature of the subjective phenomena." A physiological rule.]

**PATHOGENESIS OF
BARIUM CHLORIDE.**
(Baryta Mur.)

STRUCTURAL PATHOLOGY.

Essential Action:

"A fatty degeneration of the muscle cells of the middle zone of the media," resulting in

- a. Small isolated plaques of calcification with pittings in their centers, going on to
- b. Sacular aneurysms, distributed mainly over the aorta—thoracic and abdominal—as far as the renal vessels, or, in other cases,
- c. Complete calcification, of the aorta—entire thoracic—half the abdominal, and the vessels—of the neck, and abdomen, or again, a
- d. Diffuse aneurysmal dilatation, of the aorta—abdominal alone.

Rarely, there is "a slight thickening of the intima at the margin of the aneurysm."

FUNCTIONAL PATHOLOGY.

Essential Action. Hypertonus:

("There is a great field of evidence which is entirely lost to the physiologist, but which is open to

(Contractility failing but Tonicity good).

Essential action:

Hypertonus.

Breathlessness, on moderate exertion, or,

Tightness across the chest, or Angina pectoris, shown by

a. Pain in the chest, or

b. Gripping sensation, relieved by inaction, or breathing deeply, with

c. Respiration hurried, or

d. Cardiac asthma, or

e. Cheyne-Stokes breathing with or without

a. Cardiac irregularity,

b. Frequent or infrequent extrasystole, or

c. Pulsus alternans.

["The degrees of exhaustion of Tonicity determines the transformation of subjective symptoms to physical signs." A physiological rule."]

(Tonicity failing).

the clinician. The personal sensation of the animal can not be communicated to the experimenter, nor can the changes in sensation that result from stimulation of cardiac nerves be ascertained." MACKENZIE, *Diseases of the Heart*, p. 19).

The above applies with equal force to drug effects studied upon lower animals alone. The homœopathic pharmacologist, in this connection, may be considered a drug clinician.

Essential Action:

Heart dilates and arterial pressure falls.

Disappearance of

a. Angina,

b. Cardiac asthma, and

c. Cheyne-Stokes breathing, with

Appearance of

a. Mitral systolic murmur,

b. Anasarca, or

c. Pulmonary oedema, with bloody

sputa.

THE RELATION OF THE INORGANIC FOOD SALTS TO THE URIC ACID DIATHESIS.

BY

E. ROBERTS RICHIE, M. D., MOORESTOWN, N. J.

At the beginning of this paper I would like to state that although the views which I will advance may be at variance with those generally held by the profession, they appeal to me as being reasonable. I do not lay claim to any originality, for most of them were first advanced by a certain Dr. Lahman, who conducted a sanitarium, in Germany along these

lines about a decade ago. He based his theory on the idea that insufficient attention was paid to the inorganic food salts by practically all dietetists.

To prove the importance of the food salts, Foster tried the following experiment: He fed two dogs on meat which had been soaked in water, thus depriving it of its food salts, together with fat, sugar and starch flour. They were at the point of death at the end of the 26th and 36th days respectively, while dogs deprived of all food will live from 40 to 60 days. This certainly shows that the food salts are just as important as the organic portion, and we should know what the component parts are, i. e., how much K, Na, Ca O, P, Fe, etc., there is in each article of food.

Most physiologists claim that an average man should eat 130 gm. of proteid, 84 gm. of fat, and 404 gm. of carbohydrate in 24 hours. Milk is considered the standard food, as it is the only single food on which man can subsist for any length of time and remain in health. Now, if we make a quantitative chemical analysis of milk, we find it corresponds very closely with the same analysis of the ash of the body of a dog or a rabbit. Consequently is it not fair to reason that our diet should contain the same proportion of inorganic salts as we find in the standard food, milk. Cow's milk has an average of .7 per cent of food salts, which, in their turn, have the following percentage composition:

Total quantity of food salts from 3500 gm. is 24.85 gm.

K ² O.	Na ² O	Ca O.	Mg O.	Fe ² O ³ .	P ² O ⁵ .	Cl.
6.02	2.36	5.83	.74	.13	6.94	3.48

If, now, we make a meal containing the correct proportion of organic matter, from a menu of meat, potatoes, green peas, brown bread, milk, coarse flour and butter, and calculate the food salts from Wolff's Analyses of Ashes, we find the following percentage composition:

K ² O.	Na ² O.	Mg O.	Fe ² O ³ .	P ² O ⁵ .	Cl.
5.2	.49	1.13	.105	5.49	.41

This food mixture taken from König's rations for working men, compared with cow's milk, is poorer in soda nearly five times, in lime over six times and in phosphoric acid and chlorins. It is richer in magnesia only. From this comparison we see that:

"Firstly, a food mixture may correspond perfectly to the normal food mixture with regard to the organic substances contained in it, but may differ from it very much with regard to the inorganic substances."

"Secondly, the total amount of food salts contained in the ordinary food of the average person, is not only too small, but the relative proportion of the food salts to each other also differs widely from that of the normal or correct food-mixture."

With the foregoing as a preface, let us take up the origin of uric-acid. The old idea held by Liebig and others that uric acid was a product of albuminoid decomposition, and a preliminary process to the production of urea, no longer prevails. We find that uric acid can be produced by feeding an animal with nuclein. There are other substances closely resembling uric acid also formed and these are called the "alloxuric bases," consisting of hypoxanthin, guanin, xanthin and adenin. Now, there are two sources of nuclein and consequently of the alloxuric bases. Part is derived from body-cells, leucocytes, etc., and part is derived from certain articles of food, especially meats. It has been shown that uric acid is the most highly oxidized of the alloxuric bodies and is really the normal end product of nuclein metabolism.

Notwithstanding the prevailing belief to the contrary, uric acid is chemically harmless. A. C. Croftan has shown that it may be fed to animals or injected into their blood in large or even repeated doses without any apparent effect. The fact that it is found in the urine of a patient suffering with an acute attack of gout is really not significant, for Garrod has shown that it is also found in the same patient in the same quantity between his acute attacks. Moreover, a patient suffering with leukaemia has abundant uric acid in his urine, but does not at the same time suffer with gout.

On the other hand we find the alloxuric bases, which are really worn out nuclei, to have the poisonous effect of powerful alkaloids. They are much more soluble and it is to them alone that the long train of symptoms usually ascribed to the uric acid diathesis, is really due. These alloxuric bases are converted from physiological toxins into uric acid, an inert body, by the process of oxidation.

To quote from Lahman: "For the formation of uric acid in the human organism, we must take into account not only

the food ingested, but also the special behavior of each individual organism as regards its metabolism. Hitherto the formation of uric acid has been traced in a general way to a flesh diet, but we now know that it is formed from the cell nuclei, consequently it can also come from a cereal and pulse diet, as these foods are rich in nuclein."

Now, why is it that uric acid and the urates accumulate in the body instead of being completely excreted by the kidneys as the urea is? In the first place that which passes through the liver will be changed into urea, provided the liver is not diseased or overworked. But that which is drawn directly from the digestive tract, and that formed from the assimilated food or from the body material has to be oxidized in order to change it into urea. If a person's blood is in good condition, i. e., if there are sufficient iron, sodium and calcium salts in it, he can oxidize the uric acid very well, and so prevent its being precipitated. We will remember that it is the iron in the hemoglobin of the red corpuscles which absorbs the oxygen in the lungs, but it is the sodium and calcium carbonate in the blood serum which absorbs the CO_2 from the tissues. If, now, the blood serum is lacking in soda and lime salt it will not absorb the CO_2 properly and thus the tissues will not be properly oxidized, for it is necessary that the CO_2 be given up before the cells can absorb the oxygen from the blood. We thus see the deduction, that Lahman maintains, that we have no right to speak of the food salts as the so-called organic salts; they are organized just as much as the proteids, fats and carbohydrates.

Even Bunge observes that if we put together all the constituents of milk, including the inorganic salts, and feed animals on the mixture, they very soon die. He then asks the question: "Is it possible that the inorganic salts of milk should be chemically combined with the organic substances, and only be digestible in this combination?" Lahman answers this question with an emphatic "Yes."

Moreover, it is only fair to suppose that the lime salts in the bones or teeth, or the soda salts in the blood serum may need replacing, just as much as the proteid in the muscle, though, of course, not so frequently, as the latter molecules are worked much harder.

Now, if we wish to get a diet which has the proper amount of inorganic salts, as well as in the correct proportion, we

must add foods with a high percentage of soda and lime salts. Such foods as spinach, lettuce, cabbage, radishes, asparagus, beets, carrots, and most fruits. In other words, a vegetable and fresh fruit diet is the ideal one for man, if he wishes to keep in health.

A diet deficient in these salts causes a venosity of the blood and is the great cause of the alloxuric bodies.

Let us draw a lesson from natural history. The urine of the dog or cat, both carnivorous animals, is often free from uric acid, while the urine from man varies as to the quantity of uric acid, very much with the quantity of meat consumed. Vegetarians pass almost no uric acid. We must further remember that man is the only animal which suffers from so-called uric acid diathesis.

To draw another lesson from the animals. The carnivora have no sweat glands, while man and the herbivorous animals have. If a carnivorous animal had such glands, it would be liable to have its blood much reduced in quantity following a severe run in the hot weather, owing to the sweating, and we would find a concentration of the alloxuric bodies taking place and corresponding symptoms developing. The herbivora, however, can sweat with impunity, as they have no alloxuric bodies in their blood. Consequently, we reason, man was not meant to eat food which will produce uric acid, because he is liable to suddenly lose a good deal of blood serum through perspiration, thus causing precipitation of the alloxuric bodies.

Now, as I said before, cereals and pulses will produce as much acid in urine as meat, and Bunge, who is one of the greatest authorities on physiology, advises physicians to restrict their patients with uric acid as to the use of cereals and pulses, as well as to that of meat. He regards cheese also as very objectionable, because in its preparation the basic salts have passed out of the curds into the whey, so that there are no bases left to combine with the uric, sulphuric, and phosphoric acids formed from the casein of the cheese during oxidation.

Another idea of Bunge's, which is opposed to that held by many is that salt meat and fish are very productive of uric acid. In some parts of Russia, where peasants live largely on salt fish, urinary calculi are frequently met with. The reason for this is that in the pickling process the basic alkaline phosphates and carbonate pass out into the pickle water, while the neutral common salt takes their place. In this connection

we might state that the soda consumed in the form of common salt does not answer the same purpose as the soda in the natural food salts. When table salt is eaten it passes into all the tissues causing a process of osmosis to occur, whereby the soluble contents of the corpuscles and tissue cells pass out, and the salt enters in. This pickling process is not only of no special benefit but is positively harmful.

In conclusion, then, we see that man is really an herbivorous animal. That he cannot eat flesh without alloxuric bodies forming in his system, and that these are liable to become concentrated at any time either by its excessive production or by the diminution of the blood serum due to perspiration. That the correct food for man should consist very largely of fresh fruits and vegetables, especially the juicy vegetables, for they are the only articles of diet in which we find the food salts in sufficient quantity and in the correct proportion.

PRIMARY CHRONIC NEPHRITIS IN CHILDREN.—Marfan calls attention to this morbid condition, isolated by him as a nosologic entity ten years ago and, citing six cases under his present observation, draws an outline of what he holds to be a more common affection than diagnostic records would lead one to suppose. In his present article, the youngest of the children treated was seven years old, the eldest, twelve. The beginning of the trouble is obscure, never preceded or induced by acute inflammatory conditions of the kidneys. Three keynote symptoms present are: a feeling of weariness, always tired-out; more or less marked pallor; edema. The urine is scanty and contains a considerable amount of albumin (usually 2-4 mg. and up to 8 g. pro liter); the permeability of the kidneys is normal; the arterial pressure, weak. For a long period of time the condition remains as just noted and indications of an epithelial nephritis only are found present upon urinalysis; after several years the phenomena of interstitial nephritis are discovered in addition to those of epithelial inflammation, and we find increased pressure in the vascular system; uremic conditions; polyuria. By proper treatment in the first stadium (absolute milk diet; rest in bed when edema is present) this stage may be prolonged in duration and complications avoided; in the later stage of the affection, the interstitial nephritis, Marfan finds that milk, from which most of the albumin content has been removed (the so-called humanized milk), together with food rich in malt and cereal, to be of value. During the interstitial period of the disease, complications increase in frequency and seriousness, as compared with the phenomena of the epithelial involvement (pleuritis hemorrhagica fibrosa, endocarditis, dilatation of the heart, etc.).—*Muench. m. Woch.*, No. 30.

EDITORIAL

THE EDUCATION OF THE STUDENT OF MEDICINE.

It is safe to say that the education of the student of medicine has received more attention from the leaders of the medical profession during the past year than at any other time within the past decade. The report of the Carnegie Foundation, on the status of medical education and of medical schools in the United States, created wide-spread attention and even consternation in many parts of the Country. There was much in the report to which reasonable exception could be taken, but unfortunately many of the criticisms and condemnations that it contained were absolutely warranted. The result of the discussion and contention that followed the publication of this report has unquestionably been to give a great stimulus to medical education, and while it no doubt will have the effect of closing some of the smaller medical institutions, its general effect, we believe, will be most beneficial to the progress of medical education.

Twenty-five years ago the young man who contemplated taking up the study of medicine in the United States, attended a course of lectures at a medical school, and, in addition, engaged in practical work under the supervision of a physician in his community who acted as his preceptor. While all realize that such a system could not be followed out to-day, it must be conceded by those who are fair minded that it was well adapted to the needs of the time, and that many men so trained, especially when their preceptors were physicians of wide experience and broad mental training, were, from a practical standpoint, well fitted to take up the practice of their profession when they had completed the prescribed course. In the evolution of medical education during the past twenty-five years the preceptor gradually became a factor of less and less importance, and finally became, in most instances, a mere figurehead. The portion of time that the student devoted to didactic lectures steadily increased, and finally his time was so taken up with the theoretical side of medicine that he had no opportunity to engage in the practical work of the medical art as he had formerly done. His

theoretical knowledge of science of medicine was vastly greater than that of his medical predecessors, but his practical knowledge of the art of medicine was reduced to a minimum. In the meantime, the rapid progress that was being made in the biological sciences revealed the fact that they had a very important bearing upon the practice of medicine, and educators realized that it was essential that the student of medicine should have a sound acquaintance with chemistry, anatomy, physiology, pathology, and other related sciences, in order that he might practice his profession scientifically and satisfactorily. To communicate to a student a working knowledge of these sciences by means of didactic lectures was soon found to be impossible, and the need of establishing laboratories equipped for practical experimental work was found to be an absolute necessity. The results of this method of teaching were found to be so successful that it occurred to the more advanced medical teachers to employ the same method in the teaching of clinical medicine and of surgery. While this last step has been instituted in but comparatively few of the medical schools of the United States, it is only a question of time when it will be a necessity with every school that attempts to thoroughly equip its students for the practice of modern medicine. The purely theoretical didactic teaching of the past has proved itself inadequate for the needs of the day, and it is incumbent upon the medical school of the present time to furnish in its hospital wards and in its out-patient department the practical work and experience for the student that was furnished by the medical preceptor of twenty-five or thirty years ago.

The curriculum of the progressive medical school of the present day contemplates the thorough training of the students, during the first two years of their course, in the theoretical and practical aspects of the fundamental sciences on which the practice of medicine is founded. When we come to give the student an adequate training in these great fundamental sciences we are met by many difficulties. "Art is long and time is fleeting," and the teacher is soon beset with the difficulty of imparting to the student an amount of information that it is very difficult for the average man to assimilate in the brief time allotted for his course. No doubt the practical work in the laboratory goes a long ways toward solving this problem, as the student acquires in per-

forming the tasks allotted to him a breadth of knowledge and an acquaintance with details that it would be impossible to acquire through didactic teaching. Even with this assistance, however, it is necessary that the instructor should exercise considerable discrimination in giving the student that information that is essential and avoiding a minuteness of detail which would over-tax the mental capacity of the most intelligent.

There is another matter which must be borne in mind throughout the entire medical course, and that is the *kind of mental training* that the student is receiving as the result of his work. Mere information is of comparatively little value to the practitioner of medicine unless he has the ability to weigh and consider the various factors involved in any particular problem, and to reach a decision based upon accurate observation and sound judgment. Practitioners of medicine are frequently called upon to deal with problems which are in a high degree complex, and keen discernment is frequently necessary to enable us to reach an opinion that is satisfactory to ourselves and beneficial to our patient. The "cramming" process has proved a failure. The mental development that results under the "cramming" process is detrimental rather than favorable to the development of powers of judgment and of discrimination. The medical teacher, therefore, must be careful to give the student time to assimilate the facts that are brought before him or the great object of his medical training will be largely defeated.

The last two years of the modern medical course is largely taken up with the practical side of medicine and surgery. In most of the more advanced schools the didactic lectures are reduced to a minimum. The third year men are engaged in the out-patient department, their time being divided up between the sections on medicine, surgery and the various specialties. It is their duty to take the histories of patients, to conduct examinations under the supervision of instructors, and to suggest and apply such treatment as may be endorsed by the instructor in charge. They are also required to examine the urine, blood, sputum, feces, etc., of patients under their care, and to make such other laboratory tests as are necessary in order to arrive at a correct understanding of the cases they are treating.

The fourth year men are engaged in work of a more ad-

vanced type, most of their time being spent in the wards of the hospital where they daily visit the cases under their care, and assist in carrying out the necessary treatment under the supervision of the medical instructors. The ward class is a very important factor in this system of teaching. As Dr. Howard Marsh, Professor of Surgery in the University of Cambridge, recently remarked: "It is in the wards that the student should gain a very large share of his practical education." Small groups of men can in this way be very thoroughly trained in case taking, methods of examination, special diagnostic procedures, etc. It is in this way alone that the student is able to gain that practical and intimate knowledge of the sick that was formerly acquired through association with a medical preceptor.

It is with a feeling of pardonable pride that we can call attention to the fact that the Hahnemann Medical College of Philadelphia instituted at the beginning of the present term a course of medical instruction that is thoroughly up-to-date and fully abreast of the most advanced ideas in medical teaching. With a vast amount of clinical material to draw from, every student is assured of having full and ample opportunity, not only to see, but to actually have under his care a large number of patients in the various departments of medicine, surgery and the allied specialties.

We are pleased to state that means have been provided through the endowment of a chair of Homœopathic Materia Medica, for the teaching of homœopathic materia medica in the same way that other scientific branches of medicine are taught, namely, through practical experimentation with and the proving of medicinal substances. Not only will this be of immense value to the student in giving him an intimate knowledge of materia medica, but it should also add much that will be of practical value to our knowledge of drugs and their pathogeneses.

The inauguration of such a course has presented many difficulties, and it is to the credit of the faculty that lacking a large endowment fund they have had the courage and the determination to place the course at Hahnemann on a par with that of the most progressive institutions of our Country. It is the duty of the homœopathic profession to support this new move in every way possible, and to show their endorsement of the step that has been taken by doing all within their power

to induce young men to select such an institution as the place where they shall receive their medical training. No practitioner of homœopathy need be ashamed to have the course at Hahnemann compared with that of any medical school in the United States, and by the co-operation of the college authorities and of the profession at large such a curriculum can be made a brilliant success and a lasting credit to the homœopathic school of medicine.

CONTRACT PRACTICE AND THE MEDICAL PROFESSION.

As most of our readers are probably aware, "contract practice" and "lodge practice" has grown to an enormous extent abroad, especially in England, and has worked great hardships to the medical profession. We quote the following letter from a recent issue of the *British Medical Journal* as an illustration of the attitude that medical men are being compelled to take towards this subject. Fortunately, in the United States, this problem has not yet seriously affected the profession as a whole. We believe, however, that it will only be a question of time before it will bother us quite as seriously as it is now bothering our English confreres, and it were perhaps well that consideration should be given to the matter before it reaches serious proportions. We do not propose to make any comments on this communication, but simply to present it and let our readers reach their own conclusions. The fact that the writer felt compelled to send such a communication to the *British Medical Journal* is of itself an evidence of a very disastrous state of affairs existing among the medical profession of England. After referring briefly to the indignities and hardships to which the medical practitioner must submit from lodges and commercial corporations, the writer continues as follows:

"Why are we beaten back at every turn, and why is it that apparently we can be insulted with impunity? Simply because that by our disorganization we have no power behind us. The time is past when with the slightest degree of success we can send a polite letter and beg, as it were, cap in hand, that some gross abuse may be remedied. There is no other section of the community that even dreams that such a method in their own case would be productive of the slight-

est good. Why do we continue to follow such foolish and useless moves? What is the remedy? There is only one remedy, and that is the formation of a 'trade union' among us. I use these words 'trade union' because they express without further elaboration exactly what I mean. We have all the machinery planted for such a union, and it simply needs to be put in motion. The British Medical Association is the nucleus of the whole scheme, and its office would be the headquarters of our 'trade union.'

"Such a scheme would give us enormous power, and would make us once more a dignified profession. Our troubles could be efficiently and firmly dealt with in one quarter of the work and time that is now spent upon them. In our local branches great interest would be aroused, and we should be able to do splendid reform work. Then there would be far more notice taken of our requests written on half a sheet of note paper and sent to the authorities concerned than is taken now of a begging petition presented by a deputation of our most worthy members grovelling in the dust before a committee of 'Tom, Dick and Harry.' This is the only remedy we have. It will have to come to pass, and it is a waste of time to try any other plan. Why not do it now, at this most critical time in our history? All our difficulties would then be three-quarters won already."

I am, etc.,

A. STANLEY PARKINSON, M. D.

GLEANINGS

CHANGES IN THE RESPIRATORY RHYTHM.—Frugoni gives the following as the conclusions drawn in a paper published by him in *Policlinico sezione medica*: 1. A systematic study of the capacity for change of periodical respiration in general by means of inhalations of oxygen shows that no general law can be laid down, that periodical respiration may or may not be susceptible of modification, and that it may be done away with entirely by means of oxygen. There are periodical respirations which may be modified and others which may not, so that in one and the same person and at different times contradictory results may be obtained, which are sometimes of importance, as they permit of inferences concerning the greater or less degree of pathological changes, which are in general greater when a modification is not possible and particularly when there are repeated attacks with different results in the same patient. 2. Sometimes in the course of a meningitis a periodical groaning or sighing occurs in conjunction with intermittent breathing and gives the impression of a reaction of the organism to pain. He distinguishes two forms which he designates the coincident and the tardy types. In the first the groan begins with the first breath of the spasms of breathing, while in the second it begins with the second breath or later. A study of these cases leads him to believe that the periodical sighing of the tardy type indicates in general a more serious and deeper pathological change of the respiratory centre and of the sensorium. 3. By depression of the centres with certain drugs, or by mechanically preventing respiration he was always able to obtain periodical respiration. 4. In Grocco's dissociated respiration there is incoordination of the muscles of the thorax and abdomen so that they may act completely in opposition to each other. In such cases the tendency to the periodical form is such that each pathological factor exerts the maximal functional disturbance. The prognostic significance of such a condition is serious. 5. The dissociated respiration of Grocco is less rare than is usually thought. It is not easy to diagnosticate. The thoracoabdominal opposition marks the most extreme type only, and it is necessary to exclude a partial paralysis of the one and not of the other, as well as to determine that the individual incoordinate acts are active movements and not passive. When the dissociated respiration is distinct the prognosis becomes very unfavorable, as it indicates a very serious disturbance of the respiratory centres. Still these cases do not always prove fatal. 6. Toward death it is not rare for any special rhythm to cease and respiration to become deeper and more frequent. The breast muscles usually discontinue first and the last respiratory movements are made by the diaphragm as contractions without special rhythm and separated by long pauses. 7. In nervous or functional disturbances of respiration an increase of function (tachypnœa, polypnœa)

is usual, while the opposite (spanopncea, oligopncea) is rare. Continuous forms exhibit also a qualitative disturbance in spasms, usually quick and transient, rarely tonic, of various groups of muscles, which may bring about great disturbance and ataxic incoordination of the muscles of respiration. A very frequent peculiarity is the tendency to hiccough, vomiting, the utterance of inarticulate noises, sometimes connected, sometimes explosive, or to other more or less noisy sounds. 8. The organic change frequently observed in the nose or neck is to be looked upon in the same way as the spina hystérica. 9. The respiratory muscles, especially the diaphragm, are fairly often involved in chorea minor so as to cause a change in rhythm. 10. In some cases of severe, persistent nervous inversion of the rhythm respiration of the true periodical type may be observed at the transition from waking to sleep and during the first stages of the latter. 11. In the nervous forms there is commonly a complete disproportion between the heart and the respiration, but following no absolute law.

THE SIGNIFICANCE OF PIQUET'S REACTION IN CHILDHOOD.—Prof. Feer in a report of the reactions obtained from Pirquet's method in more than 2,000 cases (using only "old tuberculin"), of which, clinically, 8.5% were positively tuberculous, 4.5% suspected, the rest, healthy, found that, of the clinically healthy none reacted during the first half-year; from 6 to 12 months, 3%. Then the number of reactions increased steadily until, in the age period of 10-14 years, it was 38%. Thus the usefulness of Pirquet's method becomes apparent. The queries demanding response are: Is it specific? How many react? Is it injurious? As to its specificity, of 120 autopsies (macroscopic section only!) two only of those recorded as giving positive reaction were found, macroscopically, non-tuberculous. As to the second query: How many react? we are informed by Pirquet that the advanced case does not react. Aside from this, nearly all cases give reaction, though not in the same way. A characteristic difference between the active and inactive forms of the disease is not known to the author. Older children having the inactive form often react only after several days. The disturbances accompanying the practice of the method are insignificant and harmless. When we consider the slight possibility of demonstrating tuberculosis in children with bronchial glands infected, Pirquet's reaction becomes of the greatest value. Moreover, the view that more consideration is to be given the possibility of infection than the pre-disposition thereto, appeals to the pediatricist. From the work done along these lines, together with the conjunctival test, the syndrome of scrofulosis has cleared up. All children, clinically scrofulous, react. "Scrofulosis is the reaction of the exudative or lymphatic diathesis to tuberculosis." In the eye, the phlyctenule is to be considered invariably as of tuberculotoxic genesis.

OCCUPATIONAL PSYCHIC DISTURBANCES.—The psychoses developing among workers in lead are the longest and best known. In the chronic form, headaches and attacks of vertigo are observed; frequently convulsive twitchings of single muscle groups or general tremor, accompanied in many instances by symptoms epileptic in character. Often there pre-

vails a depressed, worried state of mind, an indeterminate, timorous condition, sometimes rising to a high degree of panicky fear. In some cases there develops a mixture of dementia and melancholy with hyperchondriac illusions; in other cases, notable weakness of memory, irritability, desire to sleep during the day, whilst sleep at night is broken by restlessness and disturbing dreams. In the acute form of intoxication from lead there is a condition in which all appears confused, with disconnected, fleeting ideas insane in type; relatively, the sensory illusions are rarer, but the patient's mood is ever-changing. There develops preponderatingly a high degree of motor excitement, intermittent in character and mixed with phenomena of inhibition, a condition apt to be interrupted by periods of stupor or by epileptiform states of furor. Some cases present distinct hallucinatory states. The syndrome of plumbic psychosis may be complicated with alcoholism (delirium tremoid states), an intimate connection existing between the two. The question whether progressive paralysis can be induced by saturnism has been negated.

Manganum causes a morbid syndrome known as the Braundstein-Mueller disease, the symptom-complex of which is: disturbances of speech, retro-pulsion, *i. e.*, when the patient is told to walk backwards, he becomes confused and falls, there is forced laughter or weeping, the mentality or intelligence is disturbed and there develops an accentuation of reflexes. In general, manganum causes the development of a symptomatology much resembling that of multiple sclerosis. Prognosis of cure is not to be denied in some cases.

Carbon sulphide poisoning began to attract attention about the middle of the last century—first noted in France—the vulcanizing process of treating rubber by dipping into a solution of CS₂, thereby giving it great elasticity and endurance, having received then great impetus. The disturbances resulting from this carbon sulphide intoxication are considered under the following categories: (1) General, somatic. (2) Nervous, neural. (3) Psychic, this last group being sub-divided by Laudenhimer into (a) maniacal, (b) depressive, (c) demential, which last is split into: cases of a katatonic-hebephrenitic type and those of acute but curable stupor continuing for a period of from one to three months. The prognosis in this intoxication is, as a rule, unfavorable.

Anilin and its derivatives cause a morbid syndrome, dubbed anilism to develop, a condition, however, not of the specific, clearly characterized types offered by the lead and carbon sulphide psychoses. The chief symptoms are vertigo, headache, unsteady gait, frequently loss of consciousness, cold extremities, small pulse, reflexes less active, tremors, clonic and tonic spasms, a drunken condition not differentiable from that induced by alcohol, and in serious cases, diminished sensitivity, hallucinations, long periods of unconsciousness somewhat resembling those due to a carbon sulphide intoxication.—Dr. J. Koch, *Muench. m. Woch.*, No. 29.

CALMETTE'S TUBERCULIN REACTION.—In No. 2 *Revista st. med.* Caplescu reports a considerable number of patients with tuberculosis (surgical) in whom the ophthalmic test was employed, arriving at the following conclusions: The reaction demands the greatest care in execution and is to be used only in cases where no chronic ophthalmic lesions are present, the

remedy, Calmette's tuberculin requiring sterilization. In order to interpret correctly the result, the conjunctiva must be kept under observation for two or three successive days, and to arrive at absolute certainty, the cytologic examination of conjunctival secretions should be undertaken. Despite the fact that this diagnostic adjuvant may be considered as entirely innocuous, it is not to be recommended for the general practitioner for the reason that a positive result may be due to a latent, non-surgical tuberculous infection and therefore lead to incorrect deduction with regard to the specificity of the surgical lesion. Accurate investigation of the patient, his anamnesis, the clinical signs, the appearance of the individual, the condition of the thyroid to which the author has directed attention where incipient tuberculosis is considered a possibility, are regarded as of prime importance in the diagnosis. The conjunctival reaction is to be held only as an adjuvant of value, indicated in certain cases as corroborative of the diagnostic conclusions.

CERVICAL PAIN AND SWELLING OF GLANDS.—Dr. J. Finn in the *Wiener med. Woch.*, No. 30, remarks that a great many cases with various affections of the throat are decorated with the panaceal diagnosis of "catarrh of the throat" because of failure to establish any objective cause or phenomenon in the individual case. Not infrequently, more careful investigation will discover an hypertrophy and sensitivity of the deep glands of the neck, which beneath the platysma and on about the same plane as the hyoid bone are located without much difficulty, particularly if the head be bent down and sideways toward the side of the throat to be examined. This group of glandulae cervicales profundae is the point of assembly for the lymph channels of the upper respiratory tract and, especially so, of the nose. Painful tumefaction of the glands is often the only notable symptom sequent to completion of a light catarrh of the nasopharyngeal region. Knowledge of this circumstance is not without value as prohibitory of the unnecessary and noxiously energetic treatment of "pharyngeal catarrh" by painting the available mucosal surface with energetic solutions, etc., whereby the throat troubles are merely aggravated. Proper treatment includes, at the most, the use of a vaporizer and gentle massage.

ROENTGEN DIAGNOSIS OF PYLORIC STENOSIS.—The signs of this condition are: residual food in the stomach, dilatation of that organ and abnormal peristalsis, signs demonstrable clinically and radiologically. The normal period of time after which the stomach should be empty, is from 3 to 6 hours. If, after 24 hours, portions of the meal are found, it becomes certain that stenosis of the outlet exists; sometimes in cases of this sort the dilatation and abnormal peristalsis are lacking. Cases with a residue 12 to 24 hours after eating, are to be considered as stenotic in a less degree; those with retention in less than 12 hours are difficult of interpretation, for where stenosis is just beginning there are often no symptoms in evidence—atony may be present. In such instance, the patient is examined whilst lying on the right side and the left, having been given his rations of bismuth; the posture on the right side favors, of course, the passage of food into the duodenum. If results are about the same in either posture, then stenosis is probable, but if notably different quantita-

tively the condition is likely that of atony. The radiologic investigation of gastric motility is more trustworthy than the clinical for the reason that the remains of the bismuth test meal are easy to recognize, rarely cause emesis and the technic is very simple. The radiologic method shows also whether the stenosis is of low or high degree. The bismuth menu is given at 6 A. M. and the examination made six hours later. After the same fashion, dilatation of the stomach is easily demonstrated. A valuable symptom of pyloric stenosis is peristalsis of the reversed type, the contraction-waves passing from the pylorus to the cardia.—Dr. M. Haudek, *Munch. med. Woch.*, No. 30.

LACHESIS AND LEUCOCYTOSIS.—Dr. Sidorenko, of St. Petersburg, has made a series of experiments as to the effects of *Lachesis* on the number of white corpuscles in the blood. The sixth dilution was used, and the drug administered hypodermically in 1 c.c. of distilled water. The control experiments received a similar dose of alcohol in 1 c.c. water. At the end of five minutes there was a distinct hypo-leucocytosis in the lachesis subjects, with little or none in the alcoholized ones. After fifteen minutes hyperleucocytosis set in, and was maintained for forty-eight hours, though gradually lessening after the first twenty-four hours. A much shorter and less marked leucocytosis occurred as the result of the administration of the dose of alcohol. Any laboratory demonstrations of the effects of infinitesimals are welcome, and the leucocytosis helps to explain the efficacy of *Lachesis* in septicæmic conditions.—*Hom. World*.

THE NEW REMEDY FOR SYPHILIS, EHRLICH'S "606."—The discovery of a substance that is apparently specific for syphilis comes as the result of long and painstaking search with this definite end in view, and not as the chance find of an empirical study. Twenty years ago Ehrlich conducted similar experiments on the effect of methylene blue on the plasmodia of malaria. These studies were interrupted by his brilliant work on immunity. However, the broad field of protozoan diseases, protection against which is not to be found in the production of antibodies, *i. e.*, in the therapy based on the principles of immunity, still invited the efforts of the investigator. To combat these diseases a chemical substance more toxic to the micro-organism than to the cells of the host was required. The experience with atoxyl clearly defined the characteristics which such a drug must possess. Success with atoxyl depends on the long continued administration of a substance which is toxic to the host as well as to the protozoan. Frequently the protozoa acquired a resistance to the influence of the drug, while the accumulating amounts became more and more toxic to the host, resulting in blindness and the other well-known phenomena of arsenic poisoning. Therefore, Ehrlich sought to find a drug, which did not require long administration and which would overwhelm the micro-organism without injuring the host. This is the principle of Ehrlich's now famous "therapia sterilisans magna."

Paradiamidodioxarsenobenzol (arsenobenzol) or popularly "606" is the preparation which produces this sterilisatio magna; it is a sulphur-colored powder with the formula $C_{12}H_{12}O_2N_2As_2$. It is put up in vacuo in the form of the dihydrochlorid. The term "606" indicates the number of

compounds investigated and is a gauge of the remarkable perseverance of Ehrlich and his collaborators. This particular preparation was investigated by Hata in spirilla diseases of mice, rats, fowl and finally in treponema pallidum infection in rabbits, and only after its success in these diseases was demonstrated, was it used in syphilis in man.

The method of administration has passed through various stages: The one now used avoids many of the minor but unpleasant symptoms at first encountered. Wechselmann, who is responsible for the perfection of the method, dissolves the substance by triturating it "in a mortar in from 1 to 2 c.c. of soda solution, when by adding acetic acid in drops a fine yellow paste is precipitated. This precipitate is then made sterile and dissolved in from 1 to 2 c.c. of distilled water and neutralized by the addition of 0.1 normal soda solution or 1 per cent. acetic acid, according to a very carefully ascertained reaction with litmus paper. *The absence of pain depends on the exactness of this neutralization.* The deposit is centrifugized and the paste which is deposited in the bottom of the glass is shaken up with a physiological sodium chloride solution. This mixture is drawn into the syringe and slowly injected subcutaneously." In Germany the subcutaneous injection is the one most used, the site preferred being below the shoulder blades.

The reported clinical experience comprises about 4,000 cases. While the short time during which the drug has been used does not justify a final opinion as to its permanent curative power, there is conclusive evidence of its striking beneficial results on the lesions, symptoms, and serum reaction in all three stages of syphilis, and some suggestive results with the paralytic affections. Though varying in detail, reports indicate the rapid cure of primary leucic lesions; "ulcers become clean after 12 to 24 hours," and complete healing occurred in some cases in two days, while others required nearly a month. In the treatment of secondary and tertiary lues authors are at one in extolling the virtues of 606. The lesions of mucous membranes, genital and anal papules particularly, disappear speedily within 2 to 5 days. However, the rapidity of cure of any particular lesion depends on anatomical relations and the type and condition of the circulation to the affected part. (Thus is explained the slow cure of interstitial keratitis, etc.) The reports of the above cures with the new remedy are striking, but the results obtained in the treatment of malignant lues would appear to be the magic workings of some supernatural power, were it not for the authoritative sources from which the reports emanate. Especially those cases which do not tolerate mercurial cures, and those which have resisted inunction, injection and bath, and wander from clinic to clinic, furnish the most remarkable examples of the effect of the new remedy. The paralytic affections have been treated only lately and definite conclusions cannot be drawn. However, in some cases of dementia paralytica and also tabes "a favorable influence" was noted on certain of the symptoms "that had existed for years" and a beneficial effect on the general condition. Finally, Wechselmann adds: "In advanced cases we cannot hope for success, but we must not forget that there exist in paralysis and especially in tabes, besides the process which cannot be repaired—syphilitic lesions, especially of single vessels, gummata, etc., where an improvement is possible."

The use of arsenobenzol in infants and children was at first thought to be dangerous. The findings of Taege, and of Dohut are of timely interest. Both report striking and rapid cures in infants after injection of the nursing mother with "606." As the drug was not excreted in the milk, the results are explained by assuming the "production of antibodies in the mother from the sudden destruction of the spirochetes and the liberation of their endotoxins." Herxheimer and Schonnefeld have since reported the use in infants and children of doses from 0.02 to 0.05 with good results and no by-effects.

Concerning recurrences following the use of arsenobenzol final opinion is as yet unwarranted. Recurrences have, on the whole, been comparatively few. Although most authors do not mention whether another injection was tried, Wechselmann definitely states that in recurrences as in refractory cases a second injection is uniformly successful. From a practical standpoint the experience of Braendel and Clingstein with a case which was wholly refractory to mercury and not completely cured by "606" is interesting, for a return to mercurial following the arsenobenzol treatment met with immediate success. This naturally invited the suggestion that mixed arsenobenzol-mercury treatment be used on cases refractory to either drug.

The effect of arsenobenzol on the spirochetes has been almost but not quite uniform. In the vast majority of cases the organism disappear or show signs of degeneration in about 48 hours. But from the fact that several cases failed to improve under treatment with normal doses, we must assume that there are certain strains of spirochetes wholly or partially insensitive to "606." The occurrence of such "arsenic-fast strains" is to be expected; for we are familiar with "mercury-fast strains;" and know that many other organisms show similar peculiarities.

The Wassermann reaction has in most cases (from 75-90 per cent.) promptly changed from positive to negative. Occasionally a negative reaction has become temporarily positive, but the results in most cases have been satisfactory, the change in reaction occurring in from 4 to 79 days.

The dangers and by-effects (*Nebenerscheinungen*) have received careful attention from all investigators. The serious results encountered by Bohac & Sobotka in 3 out of 14 cases were not noted by other authors. The earlier method of administration was used (injection of a 60 c.c. acid solution containing methyl alcohol) and Ehrlich considers the resulting symptoms (constipation and tenesmus, retention of urine, loss of patellar and Achilles reflexes, all temporary) characteristic of methyl alcohol poisoning.

It seems, therefore, fair to conclude that where proper precautions were observed, no fatalities have resulted from the use of 606. The eye grounds also have been watched with considerable care and no evidence of arsenic poisoning has been seen. An occasional increase in pulse rate up to 120, temporary pyrexia in about one-third of the cases (in some instances as high as 103 and 104) and moderate pains for 6 hours after the injection are the only other phenomena of importance. The leucocytosis and the occurrence or accentuation of a roseola rash (the Jarish-Herxheimer reaction) are of academic interest only.

Consideration of the above shows some of the conditions rendering the

use of arsenobenzol inadvisable. Severe disease of the central nervous system, cardiac disturbances, particularly angina pectoris, arteriosclerosis, a generally anemic and debilitated condition, and advanced disease of the other vital organs not caused by syphilis are, according to Ehrlich, the chief contraindications. Though no retinal lesions have followed the use of arsenobenzol, Wechselmann considers it safer not to administer 606 where retinal disease exists, because of the well-known visual disturbances caused by most arsenic preparations. Ehrlich and others repeatedly emphasize the necessity of making a thorough examination before initiating 606 treatment. Tuberculosis is not a contraindication. The class of cases precluded from the benefits of the new remedy is, therefore, exceedingly small.

What is the significance of this discovery? Is it really a boon to humanity? Proof of permanent cure must await the test of time and wider experience, but even if nothing more is proved than what has already been accomplished, much has been gained. The new discovery seems peculiarly teleological, in that it fulfills the shortcomings of the older methods; arsenobenzol is strongest where mercury and iodides are weakest. The very patients who do not tolerate mercurial treatment, respond most satisfactorily to "606." Likewise, the cases of malignant lues that have resisted syphilitic cures in all the forms known to medicine—the pitiable caricatures of human beings that literally rot to pieces before a foul disease—undergo the most marvelous transformations of all. Finally, we must recall the advantages of the single injection over the unpleasant cures prolonged over years. The *therapia sterilisans magna* is of vast practical importance, for there are great numbers of cases theoretically curable by mercury, but practically without the sphere of its influence. On account of the duration and inconvenience of mercurial treatment, patients, particularly of the ignorant classes, discontinue treatment when their symptoms subside and long before actual cure. Should "606" prove to be permanently curative, these cases would be saved. Furthermore, if we assume complete and early sterilization by arsenobenzol injection, we must conclude that the later manifestations of the disease—the paralytic affections—will thereby be prevented. The decision of this question must await the test of time. From the social-hygienic standpoint the single injection is also of importance. For with this simple therapy the great source of infection, the underworld, may be attacked and the final eradication of syphilis become a possibility.—*Medical Review of Reviews*, October, 1910.

ON SO-CALLED DOUBLING OF THE PUNCTA LACRYMALIA.—The following case: A young man of 25. Was asthenopic and was refracted and corrected. Epipora persisting in the left eye, the lachrymal channels were explored. While employing a Meyer's syringe a tiny stream of water was emitted from a point about three MF. internal to the puncture. This orifice was on the lid margin in the same line with the puncture, the two connecting through the same canaliculus, the second opening being a narrow slit on the level with the lid margin. There was no doubling of the upper canaliculus nor of the canaliculus in the lids of the other eye. No explanation is given in authoritative works of this condition. There

is reference to the fact that occasionally the absence of the canaliculi may be replaced by a groove in the lid margin. This groove is probably a remnant of the lacrymo-nasal groove, which appears about the sixth week of foetal life. The thickening of its under side and development constitutes what we later understand as the nasal duct. Should involution be incomplete at any point except the natural termination of the lumen constituting the puncture, this accessory opening, in the writer's opinion, must be accepted as a congenital fistula, or what might be called a foetal cleft. The puncta consists of circular as well as longitudinal fibres, and until it is demonstrated that these supplementary openings are surrounded by both circular and longitudinal fibres it is proper to consider them not as a puncta, but rather as clefts, due to a non-development of the foetal lacrymo-nasal groove.—Dr. Fred'k T. Tooke, *Ophthalmology*.

WILLIAM SPENCER, M. D.

OPHTHALMOPLÉGIA TOTALIS (HYSTERICAL) CURED BY PSYCHOTHERAPY.—A boy aged seven years, who notwithstanding his excessive fear of the ordeal, was vaccinated. Nine days later he complained of diplopia, and was examined by the writer. Both pupils were dilated ad maximum; there was total paralysis of every muscle controlled by the third and sixth nerves of both eyes, with the exception of the levator palpebrae, which was under control. The accommodation was totally paralyzed and the eyes immovable. The vision in each eye was 6-12. The vaccination had been unsuccessful, and the abrasion had healed. A prescription consisting of syr. hydriodic acid and tincture nux vomica was given and continued for three weeks, the dosage being increased to tolerance, but without results. All medication was then discontinued; the mother was instructed to talk to the boy after he had fallen asleep and tell him that his eyes would surely be better in the morning; also to speak encouragingly to him during the day; to continue this for five days, and then to bring him back for examination. The results exceeded the expectations; the paralysis had entirely disappeared, the pupils responded to light, the muscles had recovered their full function, the accommodation was normal, and the vision 6-6. The diminution in vision was due to a hyperopia of +0.50. There has been no relapse.—Dr. Arthur G. Bennett, *Ophthalmic Record*.

WILLIAM SPENCER, M. D.

PARESIS OF THE THIRD NERVE OF BOTH EYES.—The case was that of a female aged 17 years; father died of consumption; fifth of eight children, all living except one, who died a violent death; was pale, weak, had lost flesh and was evidently cachectic. Within two months she had lost much of the power of the external muscles of both eyes innervated by the third nerve, though there was no complete paralysis of any, while the internal musculature was intact and the abducens and superior oblique were evidently affected. Four months later she died, after an illness of two weeks, of some brain disorder, part of the time unconscious and unable to speak, owing to inability to move the tongue. There were no other palsies of other muscles apparent and the ocular condition remained unchanged until death. What was the pathological nature of the lesion and where was its

seat? The fatal illness was evidently a cerebral affection and must have been connected with the preceding ocular palsies. A central origin of the paresis seems to be the only one admissible. The absence of involvement of other nerves, the limitation to the external muscles and the occurrence of both sides, strongly point to a nuclear lesion. The absence of all indications of syphilis and the utter failure to respond to specific treatment would justify its exclusion as a cause. Tubercle may be a cause of ocular palsy, and this was probably the cause of the one under consideration and was the real nature of her fatal illness. Gowers describes a condition in which there seems to be no palsy, but a general weakening of several of the ocular and other muscles of the face, with possibly a weakening of the accommodation. This may have been an example of that malady, the etiology of which is very obscure.—Dr. Thomas B. Schneideman, *Ophthalmoscope*. WILLIAM SPENCER, M. D.

THE TREATMENT OF MENTO-POSTERIOR POSITIONS.—Unterberger, in speaking of this rare and at the same time serious position of the face, points out that only about 75 cases have been collected by Reed, and that views differ materially as to treatment. His interest at present is confined to those cases in which the face has descended upon the pelvic floor, when version and substitution of the occiput can no longer be considered. Under such conditions the delivery is impossible, since the occiput and thorax must pass the pelvic inlet at the same time. Observation has shown that the majority of these cases spontaneously rotate anteriorly and are so delivered. A small number, however, remain posterior and require artificial aid; or very rarely, when the pelvis is large and the child small or macerated, delivery may occur spontaneously. It is problematic what the obstetrician should do if urgent demand exists for rapid delivery. Some have advised perforation even of the living child. A change of fetal position is preferable, and the author then relates how he was successful in such an attempt in two cases. Omitting some nonessential details, in a case of moderate pelvic contraction 14 hours in labor, showing symptoms of threatened uterine rupture, the author at first attempted with the forceps to change the position. Failing in this, he removed the left blade, and by introducing the left hand made persistent pressure against the forward temple, the position being mento-right-posterior. The right blade remained in place and slipped toward the chin posteriorly, *i. e.*, toward the left side of the pelvis, and tended to aid the introduction of the hand. The rotation, however, was produced mainly by means of the hand. In about ten minutes the chin was placed laterally. Then after removing the right blade it was comparatively easy to rotate the chin completely to the front. The forceps were then applied anew in the usual manner and delivery accomplished. Another similarly treated case is reported. Nothing new is claimed for this procedure, but it is entitled to consideration. Manual rotation is always more conservative and less likely to cause maternal injury. At best rotation is difficult and dangerous, and is to be applied only according to strict indications. Waiting may improve the conditions, since rotation often occurs if the face is not fixed upon the pelvic floor. Posture of the mother may aid in some cases.—*Monatsschr. f. G. u. G.* Vol. 31, 291. THEODORE J. GRAMM, M. D.

PLACENTAL TUBERCULOSIS.—Schlimpert's studies have led to the following conclusions: From the systematic examinations of seven placentas of tuberculous mothers a positive result was obtained five times from histological preparations and once by recognizing the bacilli in smears. The available literature of the subject mentions ten positive observations made, two of which were smear preparations showing bacilli. In five of the latter cases there existed the intervillous form of placental tuberculosis, and in three there was round celled infiltration of the placenta. The latter were derived from relatively early months of pregnancy. All of the placentas came from cases of general advanced tuberculosis. It appeared also that even in the early months of pregnancy the passage of bacilli into the placenta takes place. Of the pathological significance of tuberculosis and of the possibility of tubercle bacilli from the placenta to the fetus, it may be said that placental tuberculosis may be regarded as a reaction of the maternal organism to the infection, as a defensive provision, or it may be regarded as a stage of the disease spreading from mother to child. The author believes that the former view is the more correct. Just as in the tuberculous in whom the bacilli enter the blood very often miliary tubercles are formed in the spleen, liver and kidneys, so also may miliary tubercles form in the placenta. We need not alone regard the cases of general miliary tuberculosis, but all cases may be considered wherein bacilli circulate in the blood. It has been found by several observers that at the separation of the placenta and opening of the intervillous spaces the placental tubercles are torn into and may enter the circulation and be flooded into the fetus. This possibility naturally exists only for the intervillous deposit of tubercle, but just this form is the most frequent. On the other hand, it is not likely that bacilli easily pass over to the fetus from the masses of round cells situated in the decidua, but this may take place if a vessel has been eroded by the mass. The author has not been able to demonstrate that bacilli pass from mother to child. It is true that all the children died shortly after birth, but tuberculous changes could not be recognized. The author does not venture an opinion as to whether the passage of toxine took place and caused the death of the infants. The author says it would likewise be wrong to conclude that placental tuberculosis is not concerned in the heredity of tuberculosis. The observations of others show the great probability of this occurring.—*Arch. f. Gyn.* Vol. 90, 121.

THEODORE J. GRAMM, M. D.

VAGINAL HYSTEROTOMY.—Seitz, of Doederlein's clinic, in a most exhaustive article touching many phases of the subject, believes that this operation is entitled to much more frequent consideration and that it successfully competes with most other procedures. In the first part of his long article that author has shown that difficulties arising from the soft parts are more frequent than usually accepted, and clinically must be differentiated with more exactness. In the second part is shown how important is vaginal hysterotomy and how successfully it meets the indications for rapid delivery. Seventy cases were operated with no mortality except in one case of late eclampsia and in one case of pneumonia. The morbidity amounted to about 10%, which is the average general per-

centage. The author says with asepsis, trained assistants and good light, the operation is not dangerous for the mother. It furnishes the possibility of emptying the uterus at any moment, whereby the mother may be protected from a great variety of dangers. Of the numerous statistics given we only select one, namely, while at other clinics among 20,000 births the infant mortality amounted to over 3%, at Doederlein's clinic among 5,000 births the infant mortality was 2.28%. Since first proposed the operation has undergone many technical changes and has become much more safe.—*Arch. f. Gyn.* Vol. 90, 1.

THEODORE J. GRAMM, M. D.

SLOW PULSE IN THE PUERPERIUM AND ITS CAUSE.—Lewisohn's scientific article on this subject deals with a highly important fact with which every practical obstetrician is probably conversant; and I am certain there is no one fact, observable about a puerperal case, so surely indicative of the patient's entire condition as is this one of slow pulse. The points made by the author are that contrary to Heil and Aichel, the author believes that the slowness of the pulse is a condition peculiar to the puerperium. The frequent absence of the brachycardia depends upon the pronounced instability of the pulse of puerperae. This slow pulse is subject to the most various influences. Difficult deliveries from prolongation, forceps, attendant injuries, hemorrhage, especially lacerations, premature delivery and abortion, prevent or delay the appearance of brachycardia. Pulse and temperature are two completely independent factors. Puerperal brachycardia is a purely physiological condition, and only to be found in normal puerpera. Only such cases are regarded as normal who have healthy organs, not wounded, after a normally completed labor and pass through a normal puerperal state. The slow pulse often does not disappear on getting up, or only transiently; occasionally it only appears after getting up. Prognostically a slow pulse indicates a favorable condition of the woman; as long as the pulse remains slow the patient feels well in general, and a possible fever is only transient. The blood pressure is lower in the puerperium as compared with pregnancy. It falls particularly after the first getting up, often coincident with the pulse. Blood pressure and pulse are similarly coordinated quantities as are pulse and temperature, not standing in direct dependence upon one another. The cause of the brachycardia is the diminished flow of blood to the heart after delivery; consequent upon lessened tissue changes under which the heart functionates in the puerperium, the automatic stimulus to contraction of the heart muscle occurs more seldom than before.—*Monatsschr. f. Geb. u. Gyn.* Vol. 31, 415.

THEODORE J. GRAMM, M. D.

Monthly Retrospect OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY A. LEIGHT MONROE,
Miami, Florida.

TEA AND IRRITABLE HEART.—One thing I shall always remember of Dr. Fry.* One evening the doctor's wife was passing the tea and Fry refused. He said: "Tea, damn the stuff! it gives me palpitation of the heart." I attempted to ridicule him, but he stuck to his point. He said that when he drank tea he had palpitation of the heart, and when he let it alone his heart was all right. He had tried it over and again and knew whereof he spoke.

This set me thinking. I had had for some three years a very irritable heart. Intermittent, beats dropping out, short breath at times, the most horrible nightmares, until I dreaded to go to bed. And yet I felt well. I had both winters been examined by our professor of nervous diseases, Dr. H. B. Fellows, and he had told me both times the trouble was only "nervous." There was nothing organic. I remembered I had been having this trouble only since beginning tea drinking some three years before. I stopped my tea drinking that meal and in two weeks every unpleasant symptom had left me. The intermittence had ceased, the short breath no longer troubled me, and my sleep no longer scared the life out of me. No longer did Indians, snakes, lions, assassins, terrify my nights. I was well again, thanks to poor old Fry!

Then I began to notice the effect of tea in my patients. Whenever I heard people tell of their bad hearts I advised them to quit tea drinking, and I believe without an exception they were promptly benefited. It became a rule, if not a hobby with me, and I wiped out many a "chronic heart disease" by stopping the tea drinking, and sometimes I used one homœopathic remedy or another—Selenium did me many a good turn.

In January, 1888, I read before the Clinical Society of the Hahnemann Hospital of Chicago, a paper entitled "Tea as a Heart Irritant," and it will be found in *The Clinique* for that month. I did the paper in type-writing, a rare thing for a doctor in those days, and the easy print caught the eye of a reporter. It appeared in the next morning's *Chicago Sunday Tribune*, and from that went into the patent insides of many country papers. A patient of mine wintering in Austin, Texas, read my article over her coffee one morning, and I dreamed that I had become famous at less than thirty years of age. Although my article on tea had a wide circulation, I cannot see that my fame amounted to much.

From that article I will quote: "Where no organic lesion can be detected, and where close questioning brings out these four points: heart

* Dr. Ira Hudson Fry, of Marshalltown, Iowa, who died in April, 1910.

trouble, bad dreams, dreams worse lying on left side, tea drinker, I have found marked relief to follow the strict avoidance of tea." I learned that the so-called "green teas" were more likely to affect the heart than black teas.

In the pathogenesis of Thea, in Allen's Encyclopædia, you will find: Palpitation—palpitation of the heart at night with inability to lie on the left side. Pulse in some cases weak and slow, in others fluttering or intermitting. Sleep—sits up late at night because she cannot sleep, and often lies awake until morning; troubled dreams, waking at intervals; awoke suddenly as from a struggle of incubus. The ordinary effect of green tea taken late at night is incubus or nightmare in its most formidable shape; and many persons who, after a hearty dinner, have taken green tea, wake in the midst of the night in a state of most fearful agitation and excitement, the head is oppressed, a sensation of approaching death is felt, etc."

Let one who has seen thirty years' practice in homœopathy say to the younger doctor, don't get scared at every little irregularity of the heart. My experience is that one so seldom finds a really organic heart disease that it is best to look rather to the cause of the irregularity than to try and pronounce an organic lesion. I have many times seen people with a pulse that you could no more count than you could the little wavelets in the riffle of a creek, and yet have seen these pulses become as regular and steady as a piece of clock-work. Our homœopathic remedies will nearly always put at fault the diagnoses of the best men—digitalis, nitric acid, phosphorus, and a host of others, will steady the heart oftentimes in the most discouraging cases. But look out for tea—especially green tea.

And this is given you to-day on account of the death of an old classmate. There were many good boys in Chicago Hahnemann 1881, but they are going, going!—HORACE P. HOLMES, M. D., Sheridan, Wyoming, *Pacific Coast Journal of Homœopathy*.

PSORINUM.—Dr. A. A. Decker Holcombe in May Counselor *Extracts*. Among the strongest indications for the selection of this remedy are:

Especially adapted to the psoric constitution.

In *chronic* cases when well selected remedies fail to relieve or permanently improve, when sulphur seems indicated but fails to act.

Lack of reaction after severe acute diseases, appetite will not return.

Children are pale, delicate, sickly. Sick babies will not sleep day or night, but worry, fret, cry; or child is good, plays all day, restless, troublesome, screaming all night.

Body has a filthy smell, even after bathing.

All excretions smell like carrion.

Obstinate vomiting of pregnancy foetus moves too violently.

Asthma-dyspnoea worse in open air and on sitting up; relieved lying down and keeping arms stretched far apart, despondent, thinks he will die.

Asthma when moving the arms. Attacks after midnight. Asthma in attacks, lasting several weeks.

Psorinum will cure a large variety of coughs, dry from tickling in larynx or in the trachea of 25 years' standing, or with salty tasting, green and yellow expectoration, to a chronic blennorrhoea of lungs, threatening phthisis.

The many pains in and about the lungs that Psorinum will cure have the marked characteristic better while lying down; this resembles the asthma of Psorinum.

The skin symptoms are many and valuable, always itching, may be dry, scaly, or moist with foul discharges, worse in cold weather or from cold.

The Psorinum patient has brittle nails. Dr. Morris, of Chicago, reported a case. A letter-carrier had but about a quarter of an inch of any of the finger nails remaining. Gave a broken dose of Psorinum. In five days the patient developed an aggravated case of hives. In three months his nails were of full length.

Hands and feet burn, especially at night. Patient usually has icy hands and feet. Has cured paralysis of legs resulting from suppression of eruption on arms.

Relieves the growing pains of children who are psoric.

After citing a number of interesting cures by Psorinum, Dr. Holcombe finishes his article with the following successful prescription made by the late Dr. H. C. Allen:

Dr. H. Age 39. Practicing in a suburb north of Chicago, after a long-continued mental strain was stricken with typhoid.

Himself a graduate of a homœopathic school where he learned to prescribe empirically, he placed himself under the care of his neighbor, who did his work in a similar manner.

After a siege of six weeks the attending physician and an old school consultant decided that death was unavoidable. The doctor's wife then called for H. C. Allen. He sent a junior medical student to nurse the case.

After six hours' observation she reported the following symptoms:

Lack of reaction after acute disease, appetite will not return.

Hopeless of recovery.

Stools dark brown, very fluid and foul smelling.

Extremities icy cold, apparently lifeless.

Dr. Allen prescribed Psorinum. In six hours extremities were warming, in 12 hours patient expressed a desire for food. In two weeks the doctor was nicely convalescing and discharged.

Here Psorinum saved a very valuable life, converted two homœopathic physicians from the error of empirical prescribing, and strengthened the faith of the medical student.—Read before Michigan State Homœopathic Society at Grand Rapids.

HYDRASTIS AFTER CANCER OPERATIONS.—Our colleague, Dr. A. Mattoli, has sent us a reprint of an account of two cancer cases treated by him. The second case was one of breast carcinoma, which was operated upon. Recovery was slow, and glands soon appeared above the clavicle with evidence of commencing cachexia. *Hydrastis* 3, has evidently been of great benefit. The glandular mass has ceased to grow, the nutrition and spirits are markedly improved, and there has been a gain in weight of several pounds. The after-treatment of cases after operation is rightly regarded by homœopaths as all-important. In this case the gastric dyspeptic symptoms gave the indications for *Hydrastis*.—*Hom. World*.

GUAIACUM.—Dr. P. A. Kirchbaum in *Med. Advance*. This is one of Hahnemann's autopsoric remedies effecting every tissue in the body. It is a neglected remedy. In my opinion there have been many cases brought back to health slowly and indirectly by such remedies as *Nux vom.*, *Rhus.*, *Merc.* and *Psor.* when *Guaiacum* would have directly cleared up the whole train of symptoms.

It is pre-eminently a remedy for gout and rheumatism, if the symptoms agree. A typical *Guaiacum* patient, if there be such a thing, is one of dark complexion, tall, angular, large frame, with a not over active mind or body. Stupid at school; never learned very rapidly nor entered heartily or enthusiastically into play. They are usually termed lazy. Can be only temporarily enthused over anything. Would rather sit and dream dreams by the hour. Growing pains are complained of in childhood. Unless this growing *Guaiacum* child is properly looked after in youth, puberty may bring Consumption, Gout or Rheumatism.

I have dwelt, to some extent, upon the *Guaiacum* youth that we may be able to foresee and provide for the after picture, when the joints become involved. As was the boy so is the man. He sits yawning and stretching for hours. Is so exhausted that he dreads to move. Dissatisfied, impatient and fault-finding with everyone. His whole body feels drawn up and contracted. His sleep does not refresh him, and it takes most of the forenoon to pull himself together. Feels better in the afternoon, when he is liable to have some fever.

Weakness runs all through this remedy. His thighs are too weak to support his body. He becomes too tired to sleep or sleeps only in a restless way with disturbing dreams.

There are actual contractions in all affected muscles, whether of eyes, legs, uterus, or bladder. These contractions prevent motion. Incipient and localized Tuberculosis in patients that are always chilly, even by a warm fire. They sweat about the head, have dilated pupils, and lassitude.

Dry cough with loss of breath. The cough comes from tickling in the pit of the stomach. In advanced tubercular cases, the patient coughs and hawks up copiously a fetid pus. Excretions are all intolerably offensive from the bowels, nose, ear, bladder or uterus.

Stitches in the region of the second, third and fourth ribs, more often the left side, and these are aggravated by inspiration. The difficulty is more from contraction than from inflammation. There may be no fever; Pleurisy, when *Aconite* and *Bryonia* fail to relieve the stitching pains.

Abscesses in any part of the body, bones or muscles; in Rheumatism or Tuberculosis. Quinsy in tubercular, rheumatic or mercurialised patients, the tonsils are swollen, red, burning and very sensitive to touch, aggravated by heat. Burning is the most pronounced symptom. *When curative in Quinsy, Guaiacum produces a sweat, as the first indication of relief.* It will abort more cases of Quinsy than any other known remedy. Why? Because Quinsy is apt to attack persons who have a tubercular or psoric tendency.

Ozanam says, it combines the properties of *Bell*, *Apis* and *Baryta Carb.* It has the erythematous or inflammatory angina, with the bright redness of *Bell*, the œdema of *Apis* and the phlegmon with tendency to suppuration of tonsils of *Baryta Carb.* and *Apis*.

All the affected parts of Guaiacum are sensitive to touch and aggravated by heat, whether the pain be in bone, muscle, or fibrous tissue, but general heat is soothing.

Sticking pains in the tonsils, sticking pains in the head, ears, bladder, urethra, chest, everywhere. These sticking pains come in the teeth, when biting. The teeth appear too long. The whole mouth is red, sore, burning and sticking, the pain takes away all desire for food. The tongue is so thickly furred white or brown, as to interfere with taste.

Neuralgia on the left side of the face, which comes on in the early twilight and lasts all night. With this there is drawing in the muscles, sticking pains, the mouth is dry. * * *

Briefly summing up, I would say, do not forget the contractions, the offensive discharges, the sensitiveness to touch, the aggravation from local heat with the desire for heat in general, the temperament, the rheumatic, gouty and tubercular patients, the slowness of comprehension, and dread of motion, the fault-finding and dreamy nature with desire for sleep, and you will have a picture that will point you to the administration of *Guaiacum*.

DISEASES WHICH KILL DOCTORS.—Some interesting statistics have been published in Paris showing "the diseases which doctors die from." Forty-four per cent., it appears, die from heart affections, 20 per cent. from nervous disorders, 20 per cent. from the drug habit, and 7 per cent. from tuberculosis.—*Denver Med. Times*.

THE EARLY RECOGNITION OF CANCER OF THE WOMB.—Frederick McCann (*The Practitioner*, September, 1910) says that of all the diagnostic problems which present themselves for solution in the daily practice of our art, there is none which calls for more accurate observation and critical judgment than the detection of malignant disease in its initial stages. The resources of modern surgery have brightened the outlook for those afflicted with cancer, when this disease is recognized early and prompt and effective surgical treatment is offered. That this is true when the womb is attacked is borne out by the results which have been obtained throughout the world. The practitioner is justified in advising his patients to undergo the modern extensive operations, because they are followed by better results than any method of treatment yet employed. The following summary of the early signs and symptoms of uterine cancer may serve as a guide in these cases:

Irregular bleeding of any description, even if there be only traces. Watery blood-tinged discharge; in the early stages almost complete absence of pain. The majority of the cases occur between the fortieth and fiftieth year, and the symptoms are regarded as due to change of life. The presence of cancer in such cases should be excluded. Bleeding, however slight, occurring after the menopause, should give rise to the suspicion that cancer is present. A careful bi-manual examination should be made in every case, even if bleeding exists. When examining, the condition of the vaginal portion of the cervix should be carefully noted, and also of the cervix proper. Most cases of uterine cancer begin in these positions. There are, however, cancers situated high up, in the cervix

or the body of the uterus, whose detection is only possible by the use of the curette. The microscope plays an important role in doubtful and suspicious cases. If a suspicious hard nodule, an erosion, or an ulcer on the external os, is present, it should be excised with a boundary of healthy tissue. If the vaginal portion be intact, and if there is uterine bleeding, material for examination may be obtained by using a curette or sharp spoon. If cancerous tissue is discovered immediate operation is imperative. The early cases are the most favorable for operation, and the use of caustics and other temporizing methods are merely a waste of time.

EXPERIMENTAL POLIOMYELITIS.—Dr. Simon Flexner (*Pediatrics*, August, 1910) contributes an article which goes a long way towards solving the mystery surrounding poliomyelitis and enters us on an era of knowledge respecting the disease.

Poliomyelitis is an infectious disease, but whether or not it is contagious is not positively settled. It prevails chiefly among children, but it is not limited to childhood. The author points out that the disease should be called diffuse myelitis when it attacks the cord and diffuse encephalitis when it affects the brain.

The work of Drs. Flexner and Lewis has been especially with monkeys. The material consisted of a whole spinal cord and part of another from two children that had been infected and died. The virus from this material was inoculated into the brain of a monkey and has been continuously transferred until it is in the twentieth generation and more active than ever. Thus poliomyelitis is infectious and is due to a living virus. The effects on monkeys are like those in the human being. The same variations in intensity occur.

It has been determined that the virus belongs to the class of filtrable viruses. The micro-organism has not been seen with any degree of certainty. The virus withstands great cold and excessive drying. In this it is similar to the virus of rabies and vaccinia. Thus far it has been impossible to reinoculate an animal that has recovered from one attack of the disease, and nothing has yet been accomplished in the way of treatment.

As epidemic poliomyelitis bears some relation in its prevalence to epidemic cerebro-spinal meningitis, it may be that its mode of entrance and exit is similar, being perhaps transmitted by the mucous membrane of the naso-pharynx. As this seems at the present time to be the probable mode of transmission, the author concludes that protection against the spread of the disease should be sought through isolation, systematic cleansing of the nose and such other means as are used with cerebro-spinal meningitis.

THE HOMOEOPATHICITY OF RADIUM THERAPEUTICS.—I scarcely need in this company of experts to dilate upon the frank and patent homœopathy of the external use of radium for cure.

(1) Radium at once occasions certain simpler morbid processes in the skin, such as those forms of dermatitis which it is pre-eminently successful in curing. A more deferred issue is described by Wickham and Degrais as "unfavorable stimulation which may excite morbid evolution." And

morbid evolution, as we have seen, comes well within the sphere of radium therapy. While I was in Paris, a British journal published a warning against the use of radium on the ground that it may actually cause malignant disease, which by some strange perversion it is used to cure. And this is the so-called twentieth century!

(2) In the use of radium there is an indifferent or critical point, below which its action is curative, above which its action is disturbing, or destructive. Here is an instance of that alternative cell response to increasing stimuli which Dr. Moir worked out so thoroughly in his Leicester address, and which is a homœopathic canon of the first importance.

(3) Captain and chief of all the homœopathic characteristics of radium therapy is its *modus operandi* of cure. This corresponds to Hahnemann's conception of homœopathic cures being effected by the vital reaction of the sound structures and powers of the patient. "The living organism," says he, "employs . . . only so much reaction as is necessary for the restoration of the normal condition." Such a reaction of the living healthy organism, and not of the diseased elements therein, is histologically proved in the case of radium treatment in cancer.

(4) In the dynamic external cure by radium therapy, the range of dosage is considerable, the values differing some 200 times between maximum and minimum potencies as hitherto employed. The dilution is effected not only by attenuation with an indifferent substance, but also by screening. Dilution is the dominant note in practical radium therapy.

(5) *Over-doses* produce a totally different kind of action from that caused by dosage within the curative limit—not mere riotous excess of the dynamic process producing cure, but another kind of action altogether—a destructive action on the other side of the critical point.

It needs not to develop these homœopathic lineaments further. He who runs may read. Radium is one of those radii from the centre of the similar law of which vaccine therapy is another and equally striking instance.—*Journal of the British Homœopathic Society*.

NATURE AND TREATMENT OF HYSTERIA.—Romberg (*Deutsche Medizinische Wochenschrift*.) tells of hysteria as a congenital morbid disturbance in the course of associations; in hysterical anesthesia the periphery feels, the spinal cord conducts and the central convolution receives, but the complicated phenomena on the other side of the cortex are lacking. No conscious impression results. If it is possible to restore the association here normal conditions return, and some slight impetus may restore the consciousness which awakes like the sudden remembrance of a word that has momentarily escaped the memory. In children and in persons whose mental development is not much beyond that of childhood, this restoration occurs particularly easily because the physiologic development favors the reception of new associations. Thus the child hangs on the words of the storyteller while it is difficult to fasten the interest of the adult. In treatment it is important to accept the disturbances as real. The writer says it is wrong to exhort patients to exert their will; the aim should be to divert attention from the disturbances. He then says that many cases of hysteria in children are really only the hysteria of the mothers. The author adds further that it is important to seek to train

the abnormally functioning associations, especially by light systematically increasing work. This diverts the mind, which pleasure, theatres, etc., fail to accomplish. The measures which cure by a sudden impression are more liable to be effectual with children and persons with uncultivated minds. The after-treatment is extremely important following a cure of this kind, not allowing from any one expressions of surprise or suggestion that the trouble had been due to the lack of will power. The recovered functioning should be promoted by systematic exercise. The main point is to have the physician win the confidence of the patient and avoid everything tending to mysticism, especially hypnosis.

TREATMENT OF SKIN DISEASES BY COLON LAVATION.—Mantle says that there is ample proof that, in some individuals, ingested toxins absorbed in the alimentary canal show the chief evidence of that absorption by changes in the skin. The author proposes the following treatment of such cases, which consists in colon lavation: An alkaline sulphur water is generally used both for the intestinal douche and for the immersion bath which follows it. The object of the internal douche is to wash away old fecal matter and mucus from the colon and to give the mucus membrane an antiseptic dressing. This is done in the following way: A long rubber tube after being sterilized is passed into the sigmoid and is attached to a hydrostatic douche, when from twenty to forty ounces of sulphur water at a temperature of 105 degrees F. pass into the colon at a pressure of two feet, the patient lying first on the right side, then on the back, and lastly on the left side during the operation. This is repeated and the ejecta after each douche are carefully examined and reported upon by a skilled attendant. Antiperistalsis of the colon normally exists, and is an important factor in this treatment, enabling rectal injections to reach the ascending colon and cæcum when diseased. A warm immersion bath of sulphur water follows the internal douche, and when in this bath a hot douche at a higher temperature plays upon the wall of the abdomen under water from a large nozzle with fine perforations, and is chiefly directed over the site of the colon. The immersion bath not only opens out the peripheral circulation, and thus relieves any congestion of the viscera which may exist, but is beneficial to the skin and nervous manifestations the result of autointoxication.—*Charlotte Medical Journal*.

HOMŒOPATHIC REMEDIES IN TYPHOID.—Perhaps no homœopathic remedy is as commonly used in typhoid fever as *Arsenicum alb.*, yet our experience has been that it is not so often indicated as some others. If the patient is restless, thirsty for small quantities of liquids, diarrhea serious and often involuntary with a very strong odor, delirium of the active type, wants to get out of bed—then *Arsenicum* is the drug.

If the tongue is moist, the bowels loose, the patient complains of pain, is sore and complains on being moved and of the muscles and body being sore, *Arnica* is the drug.

If the lips are cracked and bleeding, the tongue, teeth and gums covered with bloody sordes, *Arum triphyllum* is the remedy.

If the pupils are well dilated, the headache frontal, the sclerotic coats of the eyes injected, the skin dry, backache persistent and delirium marked, *Belladonna* is the remedy.

If the tongue is dry, the thirst great and for large quantities of water, the delirium early and about one's work with a constant desire to go home, frontal headache, wants to lie still, diarrhea early and often epistaxis, *Bryonia* is the remedy.

If the tongue is brown with a dark red streak down the middle or the whole tongue is red and as if it had been skinned, the delirium of the low muttering type, with a constant inclination to slip down in the bed, *Baptisia* is the remedy.

If the headache is in the occipital region, the skin moist, the pulse full and soft, the temperature not running very high, the backache severe, *Gelsemium* is the remedy.

If the tongue is dirty yellow with red tip and edges, *protoiodide of mercury* will do good work.

When the delirium is pronounced and the case passes into stupor, with the pupils either contracted or dilated, the jaw dropped, the bowel movements involuntary, *Opium* is the drug.

When hæmorrhage occurs with a gush of bright red blood *Phosphorus* has done good work.

When the case has reached the third or fourth week and the diarrhea is persistent, two to six movements in an hour, yet the patient seems to be strong, *Phosphoric acid* has done good work.

If the tongue has the characteristic triangular tip, the abdomen is distended, the rose spots abundant, *Rhus tox.* is indicated.

If the urine is thick, the tongue smooth and glazed, the backache pronounced, *turpentine* is the drug.

We do not mean that these are the only remedies indicated in typhoid fever, but that they have been the ones most often indicated in our experience, and have given us good results.—C. F. Hood in the *Clinique*.

BACILLINUM AND TUBERCULINUM.—What is the difference between *Bacillinum* and *Tuberculinum*? Of these two the first named is a remedy peculiar to homœopathic practice alone; it is made from the diseased tissue of the lung, as coughed up, of one with a virulent case of consumption, or tuberculosis; this mass is triturated and then potentized, according to the methods of homœopathic pharmacy. *Tuberculinum* is the preparation used in allopathic practice, and is made from pure cultures of the tubercle; this preparation for homœopathic use is potentized according to the same methods as used in *Bacillinum*. An experienced homœopathic bacteriologist told us that he used both preparations—*Bacillinum*, when there were other micro-organisms present besides the tubercle bacilli, and *Tuberculinum* when the tubercle alone show in the sputa, or wherever the disease may be seated. He claimed that this was the true differentiation between the two drugs.—*Hom. Recorder*.

NOTES ON ALLIUM CEPA.—*Allium cepa* is a remedy which has not been developed along some very important lines. In all the clinical lectures I have heard or read, it is recommended principally as a coryza remedy, with its classical pictures of bland lachrymation and acrid nasal discharge, >the open air and< in a warm room, especially if associated with hoarseness and painful cough with a feeling as though the larynx was torn out with every paroxysm.

It is further recommended for neuralgia of the stump after amputation where the pains are characterized as fine and threadlike; and Kent recommended it in hay fever and ear-ache; but I find no reference to it in conditions of the digestive tract where it produces abundant symptoms. Probably every one is more or less familiar with the digestive disturbance which onions produce in certain individuals. Burning behind the sternum and in the stomach, with a flat greasy taste. Sensation of a load in the stomach with eructations and later the passage of offensive flatus. This usually appears soon after eating and lasts a long time. A desire for acids is developed and raw onions are made more palatable by the addition of vinegar. Raw onion is a great appetizer, and in some increase hunger to a point best described as ravenous. Ravenous hunger is a grand characteristic of the drug. Also burning. This is best described as a warm or flushed sensation. One prover describes this as a sensation of glowing warmth in the face lasting a couple of days after eating a raw onion. Others mention warmth in different parts of the body. It has caused burning during urination, with frequent passages of urine. Probably the strongest characteristic of all, is aggravated in a warm room and better in cold open air. All the symptoms with the possible occasional exception of the cough are better out of doors. Cold relieves some of its symptoms as toothache relieved by cold water. One of the provers became extremely anxious, restless and beside himself, while another became much confused on attempting mental work. It is of interest to note that oxalate of lime crystals appear in the urine after eating onions and further observation may show *Allium cepa* to be a remedy in the class of patients who suffer from oxaluria. In two cases in which I have given it successfully for digestive symptoms, the patients were of the neurasthenic type and oxaluria frequently accompanies neurasthenia.

The symptoms group themselves so as to resemble in some respects *Pulsatilla*, in others *Lycopodium*; *Nux vomica* and *Natrum mur.* are less closely related.

In looking over my records, I find I have occasionally given *Pulsatilla* or *Lycopodium* when *Allium cepa* was indicated and it was after having failed in a case with *Pulsatilla* and *Lycopodium* and while studying the provings of *Allium cepa* that its similarity suggested itself. When its modalities are present, to wit, great hunger, even shortly after eating, craving for the air and great amelioration of its symptoms in the open air, even at times their total disappearance only to return again on going indoors, and glowing warmth which may be constant or intermittent and most frequently local the case is clean cut—less prominent as modalities are <after eating and> from exercise.—Dr. Guy B. Stearns in *Med. Advance*.

KALI MUR.—I have found Kali Mur a very valuable remedy indicated in later cases of colds, deafness, catarrhal conditions and glandular swellings.

The remedy is especially successful in ear troubles. I have used it with great success in my own practice and feel that the remedy is not used as largely as it should be by the general practitioner. Because of my finding it so valuable a remedy in my practice, and since I find that its

value is not generally appreciated by the profession, I thought it well, in a brief paper, to present a few of the most prevalent diseases in which kali mur is indicated and symptoms manifested by clinical reports.

It is not my intention in writing a paper on this drug to exhaust the subject by an elaborate treatise, but simply to suggest its usefulness and advise the further provings of the remedy.

Nash speaks of this remedy as one of the so-called bichemic remedies, or one of the twelve tissue remedies, claimed by Schussler to be able to cure all ills that flesh is heir to.

It was Hahnemann who discovered the importance of the inorganic cell salts as remedial agents of a high order. He began a thorough investigation into their pathogenetic effects and therapeutic uses. His provings of lime and salt and potash prepared the way for the rest of the tissue remedies, showing what vast storehouses of medicinal force these inorganic substances are, although wholly inert in their crude state. It remained for Dr. Schussler to develop these suggestions.

Kali muriaticum, or common name, chloride of potash, may be prepared by neutralizing pure aqueous hydrochloric acid with pure potassium carbonate or hydrate. For homœopathic use, the pure chloride of potassium is prepared by trituration.

In Herring's guiding symptoms we find a long list of clinical symptoms: the chief characteristic is the white or gray coating at the base of the tongue and when found can usually be relied upon.

In the hands of the aurist we perhaps find its chief use. A great many cases of chronic, incurable deafness might have been cured with this remedy had it been used early.

It has been found very efficacious in deafness from inflammation and closure of the Eustachian tube. Dr. Copeland says when the Politzer bag fails to open the Eustachian tubes, after a few doses of kali mur, they may be inflated easily. I have used it with success for that purpose, and find it most useful in the second or later stages of inflammation and catarrhal conditions.

Deafness, due to swelling of the glands about the ears and throat or external ear, we find it beneficial. In colds, after ferrum phos., in the second stage, the phlegm is white and thick with whitish gray coating of the tongue. The vault of the pharynx is covered with adherent crusts. Dry coryza or a stuffy cold under the throat.

Schussler says the sole remedy in most cases of diphtheria, alternated with ferrum phos. and gargle with same.

Mumps, with great swelling of the parotid gland with pain on swallowing, this remedy alone will cure most cases, unless there is fever.—J. W. Craig, M. D., *The Critique*.

FOREIGN LITERATURE

ACTION OF CERTAIN PERFUMES.—In this paper we are only dealing with aromatic perfumes and not with those of fetid odor as *valerian*, nauseous as *calabash tree* and *wild cucumber*, virous as some *solanaceae*, and acrid, disagreeable odor, capable of provoking tears as the *essence of mustard*.

We are concerned here with the action of *perfumes effluvia*, but not with those cases of spasmodic sneezing, due to the irritant action of the toxic albumins of the pollen of the flowers, which produce what is called *hay-asthma*, an affection attended by coryza and attacks of asthma. The olfactory impression is the result of a chemical reaction on the pituitary mucous membrane, and certain aromatic perfumes derived from essences and other odorous principles of flowers produce diverse troubles of reflex origin which manifest themselves, either in the heart, from mere *faintness* to *syncope*, or in the stomach, attended by *nausea* and *vomiting*, especially in dyspeptic individuals, or after meals.

There are perfumes which cause *headache with somnolence*, *dyspnoea* of cardiac origin, or *vertigo*. These perfumes are still more active after partial fermentation of the flowers, as it happens in the perfumeries.

I shall mention, in the first place, the *tuberose* and the *narcissus*, whose odors are so strong that they may produce *syncope*. A florist, under my care, who had to handle continually a large number of these flowers had frequent attacks of syncope. Another patient of mine, a nervous lady, cannot smell the *tilia-flower* or carry a bouquet of *violets* in her corsage.

We are well acquainted with those *headaches* caused by the perfume of flowers kept in the sick-room or chamber, when the air is not daily renewed; especially at night time, when such flowers as the *tuberose* and *marvel of Peru* (*mirabilis jalapa*) emit more intensively their fragrance.

Among the flowers usually incriminated we may also mention *patchouli*, *jacinth*, *mimosa*, *acacia*, *jassemine*, *lilac*, *cassia* and *reseda*. I may also state to those who become indisposed by the smell of *roses* that this flower is more fragrant before the rising of the sun.

Other persons dislike the odor of the *aurantiaceas*, such as *orange-blossom*, *neroli*, *petit grain*, (?) *bergamote*, etc. Almost every physician has the opportunity to notice that potions flavored with *orange-flower*, *mentha*, *cherry-laural* are rejected by some patients. The *troane of Japan*, found in many gardens of Europe, and with much profusion, I think, has a strong odor, perceived at long distances, and capable of producing in many persons, not only *gastric trouble*, but compelling them to keep clear of their influence. The concentrated odor of *musk* causes nausea, vomiting, vertigo and somnolence, action frequently observed among the laborers of perfumeries. Others have aversion to the smell of *vanilla* and become indisposed by any amount of cream flavored with it. There are some persons also averse to the odor of the *meadow-sweet*, due to the salicylated aldehyd or to any of its derivatives, as that of *melilot* (sweet-trefoil).

Few persons care for the smell of *Methyl Salicylate* (the artificial oil of *gaultheria*) found in the natural oil of *wintergreen*, base of numerous rheumatic pomades. Finally there are some patients who cannot take, either pastilles or inhalations of *menthol* or *eucaliptol*. The perfume of *lavender* is exciting, and its essence is given in inspirations to the children of certain districts of Nice.—*Dr. Ernest Listard, of Nice.*

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SOME ELEMENTARY FACTS IN MEDICINE.

BY

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(Read at the Public Meeting of the American Association of Clinical Research, Boston, Mass., Sept. 28, 1910.)

THE American Association of Clinical Research requires us to give once a year, at least, a public lecture of an educational tendency. According to one of the by-laws, we are "to maintain a campaign of public education both among the profession and the intelligent laity on the necessity of rigid scientific clinical research, the value of such research to the profession, the benefit derived by the public from truths thus conclusively established."

The main object of the Association is the systematic, scientific investigation of the science and art of medicine by conclusive methods, by methods that will leave no doubt as to the truth of any conclusion that may be reached.

Medicine has always played a great part in the life of the human race, in the life of peoples and nations as well as of individuals. Before Hippocrates, who lived between 460 and 377, before the Christian era, medicine was the instrument of superstition, of supernaturalism. We find medicine at the birth of all religions. After Hippocrates, when medicine was supposed to have donned the cloak of naturalism, it was rather more an exchange of supernaturalism for metaphysics and some more or less natural human superstitions. Only slowly, medicine fell into the hands of observation and experiment, the real handmaidens of natural knowledge. To-day, medicine is under the aegis of science. But it would be folly to imag-

ine that, because we talk science and breathe science, and even eat science, all that goes under the name of medicine is necessarily science. Medicine is being played upon by every passing thought and fancy; and in this era of aviation when ponderable substances are carried into the air, it would certainly be remarkable, to say the least, if medicine, with its ponderable and imponderable, or hardly ponderable, elements, did not participate in the current flights beyond its proper and legitimate domicile.

There is a difference between pseudo-science and science as there is between pretence or unjustified belief and proved knowledge. There is also a difference between science and scientific methods or principles, although they are very often confused, not merely by laymen, who may be pardoned in their error, but by scientific men, some eminently scientific men no less than some whose eminence consists merely of scientific notoriety.

When a man tells us, for instance, that scientific medicine is "a discipline in which the effort is made to use knowledge procured in various ways in order to effect certain practical ends," he makes a remark which is rather more trite than significant, for it applies to every trade and human activity and does not define either science or medicine, or scientific medicine. Every carpenter uses his knowledge with his tools, his saw, his file, his chisel, to effect practical ends, to build a house or build a ship. Every blacksmith uses his knowledge with his fire and hammer and anvil to effect practical ends, to shoe a horse or tire a wheel. Every physician, good or bad, uses his knowledge that he has procured in various ways in order to effect practical ends, to ease or cure his patients. But does that make him scientific? Does that make the carpenter or blacksmith or any other laborer,—for there is no labor done but it is done with knowledge procured to effect certain practical ends,—scientific, a man of science?

We are often told that science is knowledge arranged, coordinated, systematized. But does arrangement of knowledge mean science? Does putting things of equal importance together mean science? Does systematization, classification mean science? Arrangement, coordination, classification can have reference only to method; and science is often, if not wholly, independent of the methods that may produce it. Many times scientific methods have brought forth only error,

while methods utterly unscientific have brought forth that knowledge which is the essence of science.

How often have we been told that science is merely organized common sense! But common sense really refers to judgment, the application of knowledge. Science refers to knowledge pure and simple.

What kind of knowledge? Descriptive knowledge? Does the description of the two hundred bones that make up the human skeleton, the five hundred muscles that cover it, the stretches of skin that envelope it, the score or more of organs it carries within and without, constitute the science of human anatomy? Does the description of the circulation, of respiration, of alimentation, of sensation, of ideation, of voluntary and involuntary action, constitute the science of human physiology? No, because mere description, mere enumeration of things, however true, does not constitute a science.

Science describes. But it does more than describe. It also explains. How does it explain? By generalization. It has often been said, let our experiences accumulate and they will become scientific facts. This is a mistake. Accumulated experiences can never of themselves be scientific facts. They may become the foundation for scientific facts. The knowledge gained from them, when correct, is a scientific fact; and this knowledge is a generalization. Only general facts are scientific facts. Without general facts, there is no science. For instance, the stream speeds down hill; a stone thrown falls to the earth; an apple drops from the tree; a man tumbles down a precipice. Many similar instances have been observed for thousands of years. After a time, appears Newton. He generalizes: a body in motion tends to go on at the same rate of speed in a direct line forever. He further generalizes: The pull of gravitation is directly as the mass and inversely as the square of the distance of the bodies it involves. Then comes another generalization: The planetary bodies of the solar system revolve in elliptical orbits under the joint influence of the two previous laws. These general facts made the science of mechanics, the science of astronomy, and other sciences depending on mechanical laws. A series of general facts may be generalized into more comprehensive, into larger general facts, until we reach the most comprehensive, the largest general fact or facts. For instance, motion is continuous unless interrupted, is one scientific fact; gravitation toward the

centre of the earth, is a larger fact, because it is the largest cause on earth for the interruption of motion; but it is not so large a general fact as the fact of universal attraction and repulsion, which keeps all the solar systems, the stars and planets, all bodies in their respective abodes throughout the universe.

The science of medicine, as one of the natural sciences, depends on the possession of just such general facts. Because these facts do not always appear to be clear, or are disputed, or are in the process of making and re-making, and because the clamor of suffering mankind for help is responded to more or less effectually by a mass of men and women, some trained and some untrained, some actuated by the noblest impulses and others by the most ignoble, it has been often said that there is no science of medicine, there is only an art of medicine. But this is an error. In the rush for advantage and gain, the technical part is kept forward; but an art such as the art of medicine which implies, first, the ability to recognize diseased states, and, secondly, the ability to modify them, to ease suffering, to change abnormal states into normal or nearly normal, cannot go on for thousands of years without bringing forth a mass of experiences, more or less sufficiently proved, to serve as the foundation for scientific generalization, for scientific medical facts, for a science of medicine.

The science of medicine is necessarily composite. It comprises the knowledge of human life in health and disease, physiology and pathology; the knowledge of the structures through which human life is manifest, anatomy and histology; the knowledge of the natural forces and conditions, internal and external, physical, chemical and biological, that tend to change health into disease, etiology; the knowledge of the natural forces and agents, internal and external, physical, chemical and biological, that may change disease into health, discomfort into comfort, impending death into renewed life, therapeutics.

This varied knowledge, so necessary to the scientific practice of medicine, is commonly obscured by the undue exaltation of subordinate or subsidiary elements and the corresponding abasement of the higher or more important elements of medicine until it is very often difficult to recognize the true relative status of things medical.

For instance, one of the elementary facts in medicine, al-

most universally accepted so that it is almost a dogma with the medical multitude, is the healing self-sufficiency of nature. Ever since the time of Alkmaeon and Hippocrates the idea that nature can cure the diseases she inflicts upon mankind has percolated with few modifications through the centuries, with the writings of Galen, Paracelsus, Sydenham and others, down to Metchnikoff and other present-day physiologists, pathologists, physicians. Wherein does this healing power of nature consist? What do we really mean by nature?

Ask your friends on the street, in the library, in your homes what nature is and you will probably receive as many different answers as you put questions. Yet what can we mean by nature in connection with the cure of disease? Can we mean the entire universe with all the things it contains, the phenomena it manifests, the laws under which it operates? Can we mean the sublime harmony with which matter appears to be attuned into form, motion, life, spirituality? Can we mean the creative force or forces bent upon the unceasing development of the organic and inorganic worlds? Can we mean the sequence of events as observed by us? Or, can we mean only the native quality of the individual, his biological make-up undisturbed by foreign, extraneous elements?

There can be no question that only the last can be meant when we discourse on the healing power of nature.

It is a fact that individuals do have a certain degree of recuperative power. Everybody knows how sleep will refresh, how it will give new vigor after a day's toil; how hair and nails will grow after they are cut; how tears will flow to flush out a foreign body in the eye; how we cough to dislodge a foreign body in the larynx or windpipe; how we vomit to cast out objectionable matter acting as poison in the stomach. It is wonderful how, after a hemorrhage, the pale and bloodless individual recovers good color through the making of new blood, first of the fluid portion, the plasma, then of the white and lastly of the red corpuscles; how bone will knit to bone, muscle to muscle, nerve to nerve. It is also a fact that there are certain so-called self-limited diseases from which individuals have recovered by virtue of their inherent recuperative power without extraneous assistance.

But obviously this healing power of nature is not and cannot be sufficient in all diseases. The conclusion inevitably forces itself upon us, that if the natural recuperative power

of man were sufficient in all cases, there would be no disease whatever in the world, for disease comes because the healing power of nature is not sufficient to withstand the invasion of offensive elements, to repair injuries inflicted, to restore the health lost by any process whatever within her reach in the individual. Otherwise, disease would be stifled before it could show itself. It could never come to the point of disease. There could be only health. If the healing power of individuals were self-sufficient, there would be no such thing as ununited fractures, there would be no such thing as death. Consciously or unconsciously, openly or impliedly, every practising physician, may he ever so much go into rhapsodies over nature and her self-sufficient power of healing, denies the self-sufficiency of this healing power. Hippocrates, who constantly dwelt upon this power of nature, enumerates no less than 265 drugs that he used; and as these drugs were introduced into the body from outside, they cannot well be said to have formed a part of the self-sufficient healing power of his patients. These drugs must have either added their effects to the organic reaction and reactivity of these patients or must have imparted to them altogether the necessary power for recovery.

If the Father of Medicine used 265 drugs to assist or correct nature, his children have followed in his footsteps and enlarged on his example. We use a larger number of drugs and a larger variety of means. We use drugs derived from the mineral, vegetable and animal kingdoms. We use food and water. We use air and light and heat and cold. We use mountains and valleys, the country-side and sea-shore. We use massage and electricity, mechanics and mental influence. We use surgery as well as medicine; and as if possessed with the idea that the scientific spirit is merely the desire to know or to produce something new, which is absolutely wrong, we are forging ahead, bringing forth new medicines before we have become well acquainted with the old, seeking new methods irrespective of the good that may be in the old, and all the time running on with the idea that the physician does nothing, that nature does everything.

Once and for all, it ought to be said that unless a new extraneous substance is introduced into the body, the argument holds good that a resulting cure must be due to the healing power of the organism, and if we are doing anything at all, it is to assist this healing power to assert itself. If we merely

correct the diet, we adjust the physiological elements for the mechanism of nutrition and a cure must depend on the healing power of the organism. If we use our mental influence we introduce no new, extraneous element into the body and a cure, if it results, must result clearly from the healing self-sufficiency of the organism. If we apply surgery or mechanical treatment of any kind, we merely put the patient in a position favorable to his recovery, we adjust the human mechanism in certain of its parts according to physiological tenets and requirements, but the actual cure is left to the power of the organism.

It is different if we introduce a new substance into the body, like a medicine, a drug. Here a new element enters into the production of a cure; and we have besides the internal organic power of the individual, the power, whatever that may be, of the element introduced into the body from outside and incorporated, if at all, with the elements native to the individual and accumulated throughout life.

Thus we come face to face with a second elementary fact in medicine, namely, that, after all, the healing power of the individual organism is limited and that healing power exists in substances which are naturally foreign to the body and are found outside the body.

There is more wisdom in the language of the ages than is usually believed. The art of healing is known and has for ages been known as medicine. Why? Because the physician, the medicus, was supposed to use substances that had the peculiarity of healing or mitigating human ills, substances which, not being used by any other class of men with such regularity and intent, were accorded to be his property, given the attribute of the physician, *medicinus*, *medicina*, *medicinum*, medicinal substances, medicines; and the art of using such substances, possessing healing or mitigating, curative or remedial properties, is the art of medicine.

The characteristic part of medicine is the use of medicines, the application of medicines for the healing of the sick. It is true, as we have seen, that many other things are used in the practice of medicine, diet, exercise, water, heat and cold, massage, electricity, surgery, but all these, without one exception, are merely auxiliaries, do not form the characteristic part of medicine. The art of medicine is medicine because it makes use of medicinal substances, such as can heal or mitigate disease.

For thousands of years, medicines have been used at the bedside, and while not, at all times and in all hands, with uniform success, the fact that such have been used in all climes and countries goes a good way to prove that medicinal substances must have an effect in healing and mitigating disease. But science is not satisfied with mere use, enumeration, observation or experience. A better proof is wanted than the mere say-so of any one, however competent, however truthful he may be. It is necessary to add to observation the researches of impartial experiment. As Haller said it and Hahnemann did it and as at this day, among others, our own Dr. Samuel L. O. Potter of Cooper College in San Francisco says it again in his popular work on pharmacology, drug proving is the only true basis of drug using. By drug proving is meant the giving of medicinal substances to human beings and animals in apparent health and noting the changes resulting from such administration. There are those among the profession who rely for the knowledge of drug effects on animal experimentation, and there are those who insist on proving drugs only on healthy human beings; but all schools admit nowadays that medicinal substances given to animals and human beings in apparent health cause recognizable pathological changes, symptoms that, on one hand, are expressed in sensations of disease, and, on the other hand, are manifested by ailments, ocularly and palpably recognizable by those who can recognize pathological, that is, abnormal changes.

We have seen that knowledge becomes scientific when it describes facts and explains them through generalization. There is another step to be taken before knowledge can be deemed to have reached the stature of science. The facts must be related to one another in their sequence as to cause and effect. Science establishes the causal connection between facts. Science describes, explains, connects. We know nothing unless we know the causes of things. *Vere scire est per causas scire.* It is not necessary to know at once the ultimate cause of things. There are proximal causes as well as remote and remoter and ultimate causes. It is easy to fasten one's faith to an ultimate cause of anything, to reach which would require often a life time's arduous, concentrated attention and research before it could be proved or disproved; but science does not go by leaps. Science goes by slow, but sure steps. Pseudo-science may leap over boundless wastes, but then it lands in wasted nowhere.

We must be satisfied to look for the proximal cause of things, the cause nearest to the effect, before we roam into the distance and look for a remote or the remotest cause. Most errors occur from jumping at conclusions, going out of one's way, like the Pharisee of old out of the way of the leper, to find a distant cloud of error rather than take the truth at hand. This is so easy because we live and work by inferences rather than by facts; and because we are all creatures of certain moralities, endowed with likes and dislikes, our prejudices lead us to look very often into the purpose and problematic value of knowledge rather than into the causal connection underlying scientific knowledge. But science really has nothing to say about value and purpose of knowledge. All she cares for is that knowledge be true. She assumes the value of truth. She cares not where it comes from, what its source is, where it is destined to lead. All she cares for is to find it, to establish it, to disseminate it.

This is exactly also the object of the American Association of Clinical Research. Since the inception of this Association, the cry has gone out everywhere that the enormous masses of unrelated facts comprised in the annals of medicine must be correlated lest they impede progress and only enhance present confusion, that general facts must be sought and discovered, that collective investigations must be instituted. The American Association of Clinical Research was the first to adopt the conjoined method of clinical research. This method obviates all error that may result from simple observation, enumeration, experimentation, hasty generalization; takes the human element in its continuity, throughout the entire clinical course, with all the minutiae and differences; and by verifying one observation by another observation made at the same time on the same object retains all the circumstances present at the original observations and furnishes the necessary correctness demanded by science. While science describes, explains, connects, not all knowledge that describes, explains, connects, is science. Knowledge becomes science when it describes facts correctly, when it explains these facts correctly, when it brings these facts into correct relationship as to cause and effect with one another. It makes no difference whether we first observe, then generalize, and lastly experiment; or, first experiment, then generalize, and lastly observe. What science demands is that the observations be cor-

rect, the generalizations be correct, the experiments be correct. Science demands that the conclusions be true. No two conclusions can be made from the same premises and both be equally true. Scientific methods are based on the belief that the same premises must lead to but one true conclusion; but because these methods have hitherto not been able to obviate all the various sources of error, we have diametrically opposite conclusions put forth as scientific truths. This only shows that scientific methods *per se* may not produce science. Observation has been used for scientific purposes by physicians and anatomists for thousands of years. Yet it never occurred to them, up to 1537, when Vesalius came forward as the Father of Anatomy, that if we want to know the structure of the human body, we have to observe it in the human body and not in the bodies of animals. Up to that time, the knowledge of human anatomy was based not upon human dissection but upon animal dissection.

It seems strange, but is nevertheless a fact, that there is a repugnance in the minds of many scientifically inclined individuals to accept obvious truths when offered by hands not their own. Every mother of every household knew long ago that milk would sour unless kept in a clean pan, that fruit boiled and kept from air would be preserved indefinitely, that the flesh of animals dried in the sun or over a fire would be good cured meat until eaten days and months afterwards, but what a struggle it cost to have these plain, every-day truths accepted less than fifty years ago through the labors of Pasteur and Lister! It takes years and years of effort, compared with which a military bombardment with heavy artillery is mere child's play, to do away with routine, the worship of intrenched authority, the indifference to independent procedure, the reluctance to admit that truth may reign in other quarters. It is only in the last hundred years that bleeding for all sorts of ills has been relinquished; and it is only very recently, also in the last hundred years, that we have learned, and some of us have not learned it even yet, that if we are to use poisonous substances as medicines, the less poison we use the better for all concerned, certainly better for the patient.

When we consider that our body is made up of millions and millions of corpuscles, cells, microscopic and ultramicroscopic bodies, some of which the strongest ordinary lens microscope cannot disclose; when we consider, for instance, that one cubic

centimeter of blood, less than a cubic inch, contains over five million corpuscles, and a person weighing 130 pounds may be estimated to have twenty-five thousand billions (25,000,000,000,000) of blood corpuscles alone; that on the innermost layer of the eye, the retina, thinner than the thinnest leaf we can imagine, there are over three million (3,000,000) cone-like and over thirty million (30,000,000) rod-like bodies or corpuscles to receive the undulations of reflected light; that the gray matter of the brain contains more than six hundred million (600,000,000) cells or corpuscles, and the other organs and tissues are likewise made up of millions and millions of such small bodies or cells; and when we consider that in disease, it is such minute cells and structures that are affected and that have to be reached in order to undo their affection, it ought not to be difficult to understand why substances cannot act medicinally, that is, directly, by virtue of their physical mass or their chemical properties, but do act by virtue of their physiological affinity for certain cells and minute structures in correspondingly minute quantities. The more pathologically altered a cell or organ is the more readily it will react to a small dose and spurn a large one. This is so true that only recently in such a conservative stronghold of medicine as the University of Graz, Professor Loewy, in his inaugural address as professor of experimental pharmacology declared that pharmacology cannot follow blindly the flights of modern immunology, that is, the method of curing patients by increasing their power of resistance, but must depend on a study of the fundamental cell problems, such as the physical property of the colloids, the chemistry of the cells, etc.; that a patient having functional disturbances is best treated with drugs the application of which is based on a knowledge of their action; that while there is a difference in the behavior of drugs in the normal and in the diseased organism, drugs do have an effect on the organism; that a diseased condition renders an organ so irritable as to react to a minute dose rather than to a large one.

It does seem that we are on the threshold of a new medical era. In this era which is to place medicine on an unimpeachable scientific basis, which is to determine the true relative place of every scientific part of medicine, and, thereby, establish a truly scientific practice of medicine, which is to advance medicine by the logical, scientific extension of proved

facts and principles, in this era of medical research and achievement, the public has quite as much interest as the profession; and it is in recognition of this fact that the American Association of Clinical Research, made up in its active membership of physicians and practitioners of the various schools of medicine, united for the one great purpose of making medicine what it ought to be, not the haunting place of superstition, irresponsible inspiration, pretence or fraud, but the abode of science, truth, kindness, sound judgment, has opened its doors to the public and receives into membership worthy men and women not of the profession as contributors, patrons and donors.

The public has it in its power to exercise a potent influence on medicine if this influence be given for the furtherance of rigid scientific clinical research and is not allowed to run after false gods. The benefits derived from truths conclusively established are obvious. It will no longer be possible to fasten the ignorance of individual practitioners upon the shoulders of the entire profession or to measure the science of medicine by the knowledge of single men, even the most learned. If men fail in their daily ministrations, it does not mean that the science of medicine fails. The science of medicine, the truths of medicine, will conquer all the ills of flesh.

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OPHTHALMIC DISTURBANCES IN BEGINNING MULTIPLE SCLEROSIS.—In discussion of the above subject-matter as illustrated in a series of ninety cases, Windmueller (*Deutsche Zeitsch. fuer Nervenheilkunde*, B. 39) remarks the early appearance of eye troubles in this sclerosis, holding them to be the most certain and serious symptom, almost prodromal, of the neural condition. Among these ophthalmologic morbidities are: transient weakness of vision, often acute in its commencement, or blindness as the subjective phenomenon of a neuritis optica or neuritis retrobulbaris acuta; then, alterations in ocular tissue, ophthalmologically demonstrable; temporary pallor of the papillae; more rarely in incomplete atrophic discoloration to the full extent in area of the papilla; finally, though seldom observed, absolute atrophy of the optic nerve. Actual nystagmus is relatively infrequent, but nystagmoid twitchings are often observed, having, however, but little diagnostic value. As further ophthalmic early symptoms, there occur pareses of the ocular muscles usually of ephemeral character. On the contrary, anomalies of the pupil as well as the recently noted, peripheral, greenish hue of the cornea, are not available as indications of incipient or established multiple sclerosis.

THE FEEDING OF INFANTS ON THE BASIS OF CALORIC FOOD REQUIREMENTS ACCORDING TO AGE AND WEIGHT.

BY

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(Read before the Homœopathic County Medical Society of Philadelphia, Pa.,
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DURING the last two years I have experimented with a method of infant feeding applicable to the general run of cases as we encounter them in practice and offering the advantage of simplicity and accuracy. I am indebted to Drs. Haines and Griggs for extending to me the courtesy of the wards of the Children's Homœopathic Hospital during their terms of service, whereby I was enabled to obtain clinical material during periods when I was not on duty at the Hospital. To my associates, Drs. Redman and Fletcher, I am also indebted for co-operation in the children's department at the Hahnemann Hospital.

The first and most important question to my mind that needs to be determined in rational infant feeding is, "How much food does the infant require in twenty-four hours?" Having decided this question we must next find out what the digestive capabilities of an infant at different ages are in order that we may supply it with a food containing the proper food-stuffs required for normal growth and development in a digestible and assimilable form. The first part of our inquiry deals with the caloric requirements based on the weight of the individual at different ages, in other words, the "energy-quotient" and this forms the foundation of the calorimetric method. The second part deals with the preparation of the artificial food, in other words, it brings up the subject of "modified milk." Neither of these factors alone can constitute a system of infant feeding but by combining the two we have a rational basis for proceeding with our work.

The normal growth and development of the infant depends upon the daily intake of a food of proper composition in quantities sufficient to supply all of the demands of nutrition. While it is, therefore, important to give the child sufficient food to avoid undernutrition, at the same time it is just as important to guard against overfeeding. Either will lead to serious consequences. We are indebted to Heubner for first ascertaining

the caloric needs of the healthy infant, and his figures are usually accepted by those following the calorimetric method in selecting the child's diet. Heubner estimated that a newborn babe required 100 calories for every kilogram of body-weight, or 45 C. per pound. As the child grows older its food requirements gradually fall so that at the end of the first year 80 C. are sufficient. At the age of ten years 60 C. per kilog. are needed, and for the full grown adult 43 C. are sufficient. These figures represent the number of calories per kilogram of body weight and are the "energy-quotient." They are the only accurate guide for determining the daily amount of food needed by the individual in all dietetic work.

The question naturally arises, "Why does the young infant require relatively more food than the child, and the child more than the adult?" The explanation is that the infant is a rapidly growing organism which uses its food not solely for the purpose of maintaining body temperature and replacing broken-down tissue but it also utilizes a large portion of the food for the formation of new tissue. Again, the child loses proportionately a larger amount of body heat owing to the fact that its body surface is relatively greater compared with body volume than in the adult. Although the infant gets comparatively little exercise, nevertheless there are other sources of expenditure to be reckoned with, for example, the amount of glandular energy required to digest the relatively large amount of food ingested.

The growing child has not attained nitrogen equilibrium. The healthy adult, on the other hand, is in a state of nitrogen equilibrium. By this is meant that in the adult, under normal conditions as much nitrogen can be recovered from the urine and feces as has been ingested. The child, however, retains a large part of the nitrogen of the food which is utilized in the building up of the organism.

The calorie is the unit of heat by which food values are estimated. To be more explicit, a calorie represents the amount of food by weight required to raise one kilogram of water one degree centigrade when used as fuel in the calorimeter. As oxidation enters so largely into the process of metabolism this method of estimating the nutritive value of the various food-stuffs is eminently practical.

The normal adult requires about 440 C. of proteid, 940 C. of fat and 1670 C. of carbohydrate, a total of 3050 C. The

following table gives the quantities by weight of a mixed diet necessary to furnish these food values:

Proteid, 110 gms.....	440 C.
Fat, 100 gms.....	940 C.
Carboh., 400 gms.....	1,670 C.
Total.....	3,050 C.

The fuel value per gram of the foods mentioned is as follows:

One gram of albumen, 4.1 C.; 1 Gram of carboh. 4.1 C.; 1 gram of fat, 9.3 C.

The first problem which naturally arises on taking up the subject of substitute feeding is the composition of the food, which really means the determining of the proper portions of proteid, fat and carbohydrate. Proteid is the tissue builder and is absolutely essential for the maintenance of life and the growth of the organism. Fat and carbohydrate are the fuel foods. In woman's milk, which is the ideal food for the infant, the proportions are as follows:

Fat	3 to 4%
Proteid	1.5%
Carboh.	7%

Carbohydrate is present in the form of milk sugar and forms the bulk of the solids. Its importance lies in the fact that it is a heat producer and being more readily assimilated and oxidized than fat constitutes the chief source of energy to the organism. Fat is also an important heat generator but it is chiefly stored in the tissues as a reserve food and also enters largely into the structure of the body, protecting and supporting the viscera and preventing the excessive loss of body heat by its subcutaneous distribution. The proteids act as real tissue food being almost entirely used in the formation of new tissue, although excess of proteid is oxidized and may thus act as a heat producer.

If it were possible for the infant to digest and assimilate the same elements as found in cow's milk in similar proportions or percentages as we encounter them in woman's milk, the problem of infant feeding would be a simple matter, and would resolve itself merely into the modification of cow's milk so that it resembles woman's milk in composition. Cow's milk, however, differs from woman's milk in more than a mere question of proportion of the proximate principles, there being a decided

difference in the digestibility of these elements as well. Clinical experience, therefore, teaches us that the infant cannot digest a substitute food nor assimilate it as readily as human milk and we are consequently forced to begin feeding the new-born babe with relatively weak mixtures, gradually increasing the strength of the food as the child grows older and its digestive tract evolves.

It is still believed by some pediatricists that the proteid of the milk, that is, the casein, is the most indigestible portion of cow's milk, and that if the percentage of casein be reduced the other constituents can then be as readily digested as those of woman's milk. This, however, is not the case. Fat offers just as much, if not more, difficulty as proteid in its digestion, and if both of these elements are present in large amounts, or if the child is fed upon a mixture rich in both fat and sugar, digestive derangements are sure to follow. From a long experience with the use of milk and cream mixtures and top-milk formulae I have come to the conclusion that the average infant, sooner or later, develops symptoms of over-feeding and of fat indigestion. Most serious consequences may finally result if such a method of feeding be persisted in. My experience in the last two years with plain milk dilutions according to the method advocated by Heubner and followed by the leading Continental pediatricists has given me such excellent results that I recommend it not only for its efficacy but also most strongly on account of its simplicity.

The following rules for diluting the milk should be observed:

For an infant under two months old, one-third milk to two-thirds water.

From the second to the fifth month, equal parts milk and diluent.

From the fifth to the ninth month two parts milk to one part diluent. As such dilutions are not sufficiently nourishing in the amounts in which they can safely be administered, it becomes necessary to increase their caloric value by the addition of a carbohydrate, i. e., sugar. This is added in amounts of 5 per cent. or 1 oz. sugar to 20 oz. of diluted milk. The following table is one which I have worked out and it has proven successful in the great majority of normal cases in which I and my colleagues have employed it. By "one-third milk" I mean 1 part whole milk, 2 parts water, 5 per cent. sugar. Half milk

represents equal parts of milk and barley water plus 5 per cent. sugar. Two-thirds milk is made with a stronger barley solution and contains 4 per cent. sugar, the flour making up the other 1 per cent. The caloric value of one oz. of the above third milk is 13 C., one-half milk is 16.5 C., two-thirds milk is 20 C.

2 to 4 weeks.....	2 Oz.	2 hrs.	20 Oz. or	260 C.	} $\frac{1}{3}$ milk.
4 to 6 weeks.....	3 Oz.	2½ hrs.	24 Oz. or	312 C.	
6 to 8 weeks.....	4 Oz.	3 hrs.	28 Oz. or	364 C.	
8 to 12 weeks.....	4 Oz.	3 hrs.	28 Oz. or	465 C.	} $\frac{1}{2}$ milk.
3 months	5 Oz.	3½ hrs.	30 Oz. or	500 C.	
4 months	5½ Oz.	3½ hrs.	33 Oz. or	550 C.	
5 months	6 Oz.	3½ hrs.	36 Oz. or	600 C.	} $\frac{2}{3}$ milk.
6 to 8 months.....	7 Oz.	4 hrs.	35 Oz. or	700 C.	
9 months	8 Oz.	4 hrs.	40 Oz. or	800 C.	
9 to 12 months....	9 Oz.	4 hrs.	45 Oz. or	1,000 C.	} $\frac{3}{4}$ milk.

It shall be my aim to make this paper as clear and non-technical as possible, so I shall explain briefly the basis upon which this table is constructed. In the first place, the reasons for diluting the milk have already been referred to as well as the object in adding additional carbohydrates. The amount of fat present in dilutions of a good quality of milk which should run uniformly 4 per cent. is quite sufficient for the healthy development of the infant as I can testify from my own observations and as experience of numerous pediatricists of high repute verify. Amounts of fat running about 3 and 4 per cent. in a modified milk formula are very apt to produce disturbances in the infant's digestion.

I have, for a number of years past been impressed with the necessity of recognizing this apparently insignificant fact as a most important etiological factor in some of the more obscure general disturbances encountered in infancy, and I quote from a former paper: "The great evil that sprung from the percentage method was the excessive feeding of fat and the insufficient amount of proteid which the child usually received. As a result of such feeding there was a decided increase in the number of under-nourished—not under-fed—infants, and we also encountered quite an array of cases with fat indigestion, the manifestations of which ranged from simple gastric disturbances to the gravest forms of gastro-intestinal intoxication and secondary metabolic disturbances. The last named effects in some instances, attained the state of a serious autointoxication; recurring vomiting, convulsions, acetonuria."—(*Hahne-mannian Monthly*, Dec., 1907.)

I would also call your attention to the interesting fact that infants presenting the "exudative diathesis" of Czerny are particularly intolerant to cow's milk and especially to the fat, and that frequently they will not gain in weight until we remove all the cream from their food.

The proteids in these formulae are present in somewhat higher percentages than usually prescribed in modified milk formulae, but when the fat percentages are relatively low casein is quite readily digested in fairly large amounts by the healthy infant. It is only when cream is added to the formula that proteid digestion is embarrassed and interfered with. For example, skimmed milk may be given only moderately diluted even in dyspeptic conditions and the stools will assume a pasty character on such a food while a whole milk or cream administered to the same patient in a more diluted form will give rise to curds in the stool. This observation I have repeatedly verified.

The excessive dilution of the milk is a distinct disadvantage to the child and this is obviated by the dilution above recommended. An excess of nitrogenous food, even though it be digested and mainly assimilated, is of no advantage to the organism because such a food does not increase body weight and creates unnecessary work for the skin, kidneys, and respiratory tract. On the other hand excessive dilution of the milk lowers its molecular concentration to such a degree that the system becomes flooded with water. It is not uncommon to see infants fed on excessively diluted milk develop anasarca, particularly when there is a coexisting fat dyspepsia.

The progressive increase in the percentage of proteids in the formulae is intended to meet the increasing demands of the organism for nitrogenous food as the child grows older and begins to make voluntary use of its muscles. At the end of a year the child should be learning to walk and it can then usually digest whole milk and gradually become used to a mixed diet.

The question as to the amount of carbohydrate to be given and the kind of sugar to select, is a most important one. Cane sugar is recommended by some pediatricists and while its cheapness recommends it, still it cannot always be relied upon as it distinctly upsets the digestion in many infants, especially in the amount necessary to give the proper food value to the diluted milk. Milk sugar would appear to be the ideal food. Aside from its price, however, it does not regularly influence

the weight curve as much as might be expected. I have in a number of instances demonstrated this by first feeding a formula without the lactose and then adding it, or *vice versa*. Excepting in normal infants, there is usually no distinct effect upon the child's gain as a result of the addition of the milk sugar. At the present time I am inclined to look upon the milk sugar as chiefly of value in favoring the formation of lactic acid in the intestinal tract, and I have sometimes employed it with success in overcoming proteid decomposition in the stools.

Maltose has given me the best results both from the standpoint of digestibility and assimilability. It appears to be the carbohydrate most available to the infant's economy, producing the most decided effects upon the weight curve. In ordinary normal cases any of the reliable malt preparations on the market may be employed. It is always well to combine the maltose with a cereal decoction (barley-water or a wheat flour decoction) in order that a certain amount of starch and dextrin may be present in the food to correct the laxative effect of the maltose. Some of the dry malt preparations contain dextrin and when using such plain water may be used as a diluent. A mixture of dry malt with baked flour (dextrinized) in the proportion of two to one furnishes an excellent carbohydrate for milk modification. The so-called "dextrinized-gruels" prepared by adding a diastatic ferment to a cereal decoction often gives excellent results.

In cases of feeble digestion and advanced malnutrition foods like Liebig's malt soup or Keller's malt soup are indicated. In the former the starch is completely converted into maltose through the action of the diastatic ferment contained in the malted barley, while in Keller's malt soup the flour is simply dextrinized by boiling, after which the malt extract is added. Liebig's soup is, therefore, more laxative than Keller's. Liebig's soup may also be prepared by using a malt extract containing the active enzyme in place of malted barley.

Disturbances of digestion from sugar must be watched for as they are the commonest manifestations of dyspepsia. If the stools become loose and irritating to the buttocks, we have an excessive growth of lactic acid bacilli in the intestinal tract to deal with and the sugar should be left out of the food for a day or two and then restored in possibly a smaller amount than was previously used. Flatulency and green stools are other

manifestations of sugar dyspepsia and are to be dealt with in the same manner. If we remember that the most likely disturbing element in the acute dyspepsias is the sugar, we will be able to correct the majority of these cases in the very beginning and thus prevent the development of the more serious sequelae likely to follow.

The salts of the milk are seldom given much consideration but they nevertheless play an important role. Cow's milk contains about three times the amount of salts found in woman's milk, and when they are administered in undiluted form, as in the case of whey feeding, they may aggravate the dyspeptic condition, increasing diarrhoea and even setting up the so-called salt fever. Iron is deficient both in cow's and in woman's milk for which reason an infant fed exclusively on a milk diet past the first year usually gives evidence of anemia. It is true, there is a reserve store of iron in the liver of the newborn babe but this only suffices to meet the deficiency in the food during the first year of life. Lecithin, an organic phosphorus combination, is not found in cow's milk, but the child gets this from the eggs and vegetables added to the diet after the first year. I am in the habit of giving an infant after the ninth month, perhaps daily, a feeding of a strained vegetable soup containing potato, carrot and rice. This supplies it with an easily assimilable starchy food to which the child must become accustomed, and also furnishes potash salts for the purpose of overcoming any scorbutic tendency that may be present as a result of artificial feeding. I also begin to administer orange juice, a teaspoonful once or twice daily after the sixth month if the child has been brought up artificially. In regard to sterilizing the food, my personal belief is that it is unsafe to feed an infant with raw milk. The supposed disadvantages of pasteurized milk or milk boiled for not over five minutes in no way approach the risks one assumes in feeding unsterilized milk. Even when an absolutely pure and clean milk can be obtained there is a certain amount of risk in administering it raw to an infant during the hot summer months on account of the favorable medium for the growth of bacteria which milk affords.

I shall now state my position in regard to the number of calories per day considered essential for the normal gain in weight of the infant. Personally I believe that the figures of Heubner's are higher than is absolutely necessary and actually too high for the early periods of infancy under ordinary condi-

tions. Calculated on the basis of breast feeding they are, no doubt, absolutely correct, but when we resort to an artificial food we cannot expect to obtain the ideal results possible with breast feeding and we must not over-reach the mark in attempting such a feat.

My personal experience has taught me that infants can gain weight regularly and develop normally on amounts of food considerably below 45 calories per pound of body weight. According to this standard an average infant one month old which weighs about 8 1-2 pounds, would require 382 calories. To supply these would necessitate the feeding of 29 ozs. of one-third milk during the 24 hours. Such an amount the child would not be likely to digest. The fact, however, that it will gain weight on 312 calories, or 24 ozs. in the 24 hours proves that this amount is ample.

In estimating the needs of an underweight infant, it has been suggested to feed it according to the requirements of a normal infant of similar age, but if we attempt to carry out such a rule we will find the amount of food greater than the child can digest. On the other hand, if we estimate the food according to the child's actual weight, we will underfeed it. My plan has been to strike an average between the child's actual weight and the standard weight for the same age and compute the caloric needs on this basis.

Another important fact to bear in mind is that with every month the energy-quotient becomes less because of the diminished caloric needs as the child grows older. Thus, Heubner calculated 100 calories per kilogram for the newborn and 80 for the infant one year old. This means a reduction of 20 calories by the end of the first year and amounts to 1 2-3 per month. Calculated on the basis of pounds instead of kilograms one calorie every two months will be found equivalent.

The interval between the feedings should be lengthened to three hours as soon as the infant takes from three to four ounces at a feeding. With such intervals the stomach gets sufficient time to completely digest a meal and empty itself before a subsequent one is taken. As the food is increased to five ounces the interval should be still longer and six feedings in the 24 hours is all that is required. After the sixth month five feedings at four hour intervals are recommended because of the increase in the strength of the food as well as of the quantity.

I am aware that many pediatricists are in the habit of feeding

smaller quantities at shorter intervals than those recommended in my table, but the figures given above correspond very closely with the average amount taken by the breast-fed nursling as determined by careful weighings before and after nursing. The advantage of giving the digestive tract sufficient rest between meals needs no defense. Even in infants two weeks old I have occasionally encountered dyspepsia when the feedings were more frequent than every 2 1-2 hours. I have found the stomach to contain undigested milk residue by means of lavage as long as three hours after a meal in such cases. This has been observed in breast-fed infants as well as in the artificially fed and can, therefore, not be entirely attributed to the nature of the food.

THE CLINICAL PATHOLOGICAL SIGNIFICANCE OF CHOKED DISC.

BY

FRANK O. NAGLE, M. D., PHILADELPHIA, PA.

CERTAIN conditions of the fundus oculi are of pre-eminent interest and value in the diagnosis of various general and nervous diseases presenting themselves in the fundus in the following affections:

Vascular lesions.

Anemia, hyperemia, pulsations, œdema.

Inflammation of the vessel walls, hemorrhage from the vessels.

Stoppage of the vessels: embolus, thrombosis.

Inflammation of the retina.

Sensory lesions: hyperæsthesia, anæsthesia.

Inflammation and œdema of the optic nerve—optic neuritis.

Choked disc.

Affections of the optic nerve may be grouped into three classes.

1. Ascending neuritis or true inflammation of the optic nerve as in tabes, where the peripheral fibres of the optic nerve, fibres of the retina, first become involved, as has been proven by Wagenman.

2. Affections of the head of the optic nerve alone in the form of an inflammation or simple œdema.

3. Descending neuritis, originating from intracranial diseases affecting the optic nerve or sheathes by continuity. Exudations directly pass from the meninges to the optic nerve because of the close proximity of the optic chiasm to the

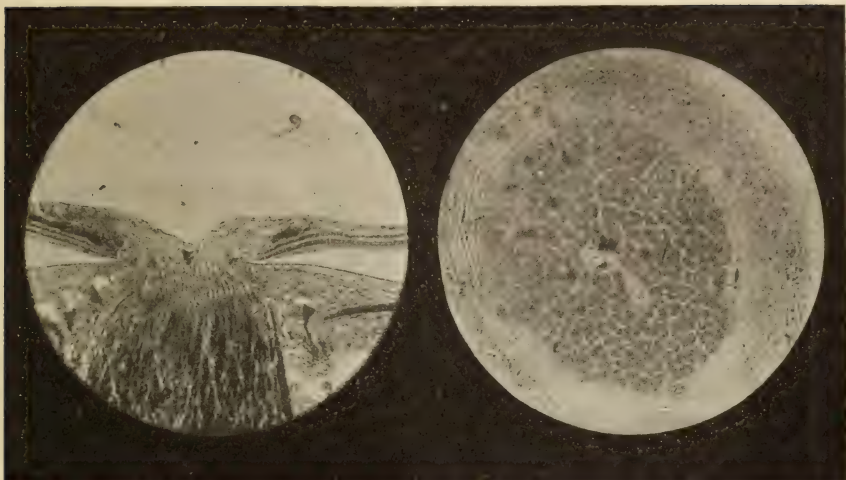


FIG. 1.—Normal optic nerve—showing conical entrance of the optic nerve through the Sclera, Choroid and Retina; optic nerve fibres taking on Weigerts stain up to Lamina Cribrosa which are seen crossing transversely the optic nerve from the inner part of the sclera. Physiological cup, nuclear layers, retina and blood vessels, choroid shown. On the right are some nerve fibres in the retina which have still retained their medullary sheath,—one of the variations of the normal fundus.

FIG. 2.—Cross section optic nerve—showing the sheaths of the optic nerve, also the Supra Vaginal space, which communicates with the ventricles of the brain—central artery and vein.



FIG. 3.—First stage choked disc—swelling of the nasal fibres of the disc,—folding up of the retina due to its being pushed backward by the oedema.

FIG. 4.—Entire papilla swollen,—coverings of optic nerve seen. Notice absence of inflammatory signs.

perforating cerebral vessels. For the same reason this form of optic nerve inflammation is frequently combined with third nerve paralysis.

Some distinction in nomenclature is needed to distinguish papilitis with moderate swelling due to a great variety of causes mostly of a constitutional nature, and papillitis with pronounced swelling of more than two dioptries associated with increased intracranial pressure, hence choked disc is an arbitrary expression denoting swelling of the papilla of over two dioptries. Von Graefe was the first who associated choked disc with increased intracranial pressure. His explanation was that it was a result of compression of the sinus cavernosus. This explanation had to be given up since Sesman has proved that the return circulation from the vena ophthalmica mostly took place from the posterior facial veins. At present there are two theories on the production of choked disc, first, the Manz Schmidt Rimpler—the pure mechanical theory; second, Leber's inflammatory theory.

Before going into these theories I will make a brief review of the histological anatomy of the entrance of the optic nerve into the eye. Remember, in order for the fibres of the optic nerve to get into the inner layers of the retina, they must perforate a channel through the sclera, the supporting tunic of the eye; the choroid, the vascular tunic; the retina, the visual tunic. This channel is called the foramen scleræ. The entire length of the optic nerve from its cranial origin down to its intra-ocular portion is surrounded with the meningeal coverings of the brain with their sub-dural and sub-arachnoid spaces which end blindly in the sclera. The behaviour of the sclera deserves special attention. The external layers curve and become continuous with the dura. The internal fibres bridge across the optic nerve in interlacing bundles. This set of fibres have a special function, and hence a special name, the lamina cribrosa. It is here that the optic nerve fibres give up their medulated sheathes. Secondly, it represents the place in the optic nerve where normally the fibres of the nerve themselves are compressed. Thirdly, it represents the place of least resistance of the eye ball to pressure. Its fibres take a transverse direction. Any pressure from the eye-ball pushes it backward, hence it is the active agent in the production of the glaucomatous cup. Any pressure from behind causes it to bulge forward, as seen in choked disc. The bifurcation of the fibres of the optic

nerve behind the level of the retina gives rise to a central depression of the nerve head, the so-called physiological excavation. It is important to remember that this is always partial, never taking up the width of the optic nerve entrance, and that its shape and size depend on the size of the foramen scleræ. If the latter is narrow, the optic nerve fibres have little space in which to bifurcate with the result of a condition known as pseudo neuritis, a very difficult diagnosis to make

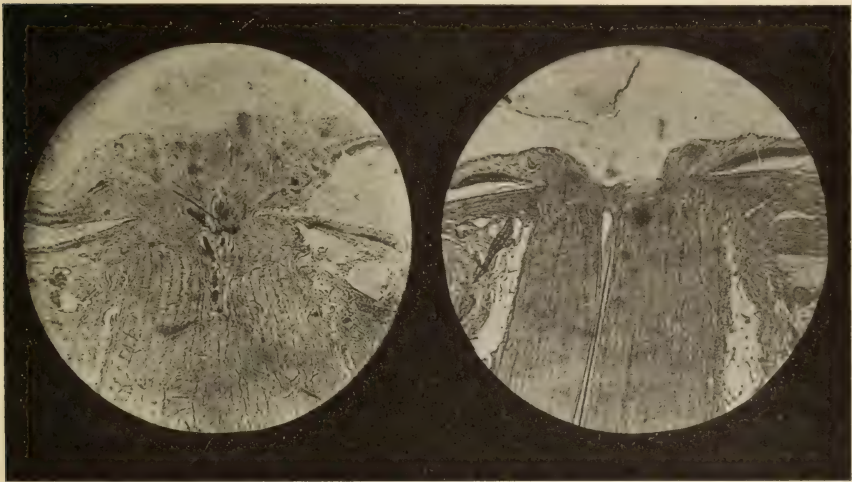


FIG. 5.—Multiple hemorrhages in the papillae, which is extremely swollen.

FIG. 6.—Stage of second atrophy—central artery retina seen in the centre of the nerve. Division of fibres of sclera shown to best advantage—inner fibres bridging across optic nerve—outer fibres continuing with the Dura. Supra Vaginal space slightly dilated. Notice preservation of physiological cup in all specimens.

in hyperopia or short eye where the retinal vessels because of lack of space, take on an increased tortuosity.

Certain physiological conditions of the brain must be considered here.

1. The skull is an hermetically sealed box with but two outlets—(1) the optic nerve sheath, (2) the spinal cord.
2. The quantity of spinal fluid normally present within the skull is in such small quantity that its ebb and flow is totally inadequate to counteract the larger changes of volume found by experimental proceedings in the intra-cranial vessels.
3. The ocular circulation is part of the intra-cranial circula-

tion and the retinal circulation is an index to the condition of the intra-cranial circulation. In animals the ocular circulation is extra-cranial.

4. Small vaso motor changes over a very limited area are accompanied by physiological results of profound importance. The demonstration of nerve fibrils upon the cerebral vessels which terminate in the muscular walls must be regarded as very strong evidence in favor of this view, hence, the vaso motor changes occurring in the presence of tumor of the brain exert a great influence in the production of increased cranial pressure.

The mechanical theory of choked disc is founded upon the discovery of Schwalbe that the meninges are continued over upon the optic nerve. The result is that an increased pressure in the brain according to the rules of mechanics must spread out equally in all directions and hence reach the papilla. Pathologically we find three great changes at the papilla, first, the lymph spaces between the nerve sheathes are dilated producing so-called hydrophs vaginæ optici; second, the swelling of the papilla; third, passive congestion.

Clinically, the vision is normal. This can remain so for several months with the exception of a few momentary attacks of poor sight. Hence, the importance of an early diagnosis of a condition which eventually leads to secondary atrophy and blindness. A well developed case of choked disc is easy of diagnosis. The beginning stage occasions much difficulty, especially to differentiate it from optic neuritis. Characteristics for the early diagnosis of choked disc are:

1. A beginning swelling of the nasal side of the papilla, dependent upon the fact that normally more fibres pass out to the nasal side of the disc, the so-called papilla macula bundle.

2. Papilla sharply outlined, and elevated above the level of the surrounding retina. Kinking of the vessels. (Optic neuritis, papilla unsharply outlined, due to exudation into the retina.)

3. Preservation of the physiological excavation due to the absence of inflammatory products. (Optic neuritis, physiological cup disappears early.)

4. Passive congestion, venous stasis present. (Optic neuritis is an active congestion.)

5. Absence of visual disturbances. (Optic neuritis, visual disturbances early.)

As far as the visual field is concerned, choked disc presents an enlarged blind spot, or a peripheral contraction of the visual field. The latter is an important index to the amount of pressure surrounding the nerve.

6. A quite characteristic early symptom of choked disc is the presence of radial stripes emigrating from the nerves. These correspond anatomically to the foldings of the retina caused by œdema pushing the normal retina away from the disc.

As far as the character of the growth is concerned in the production of choked disc depends upon whether the tumor is an infiltrating, compressing, or substituting growth. Sarcoma is a compressing growth. Glioma is an infiltrating growth. Tuberculosis, a substituting process. Hence, from a mechanical standpoint of causing increased pressure, choked disc appears in the order just quoted. Choked disc is usually bilateral. Not much stress can be laid in localizing the tumor from the eye which presents the greatest degree of choked disc.

In an acoustic tumor and tumors of the ponto-cerebellar angle, choked disc becomes a primary symptom and the eye presenting the choked disc in the greatest degree and in first appearance represents the side of the brain lesions.

As regards location, tumors of the posterior fossa most often cause choked disc. This is due to the cerebellum being enveloped in a special sheath. The tentorium cerebelli is but slightly yielding, and under normal conditions the tension in the posterior fossa is slightly elevated, hence compression of the aqueduct of Sylvius which subsequently leads to stagnation in the anterior ventricles easily takes place. Tumors of the convexity of the cerebellum have a relative freedom from choked disc, due to the protection of the basal parts from pressure afforded by the tentorium.

Tumors of the base rarely produce choked disc, due to blocking up of the vaginal spaces of the nerve so that the spinal fluid cannot enter. This is beautifully illustrated in the more recent investigations of hypophysis tumor where a simple pressure atrophy results. I have seen only one choked disc among ten hypophysis tumor patients.

Unilateral choked disc accompanied with exophthalmus means orbital tumor. In these cases choked disc is not of a high degree.

Uhthoff in 204 cases of choked disc followed to the autopsy gives the following statistics of its occurrence:

	Cases.
Brain tumor	134
Lues ceribri	27
Tuberculosis of the brain.....	9
Brain abscess	7
Hydrocephalus	7
Meningitis	2
Cysticercus	2
Sinus thrombosis	2
Deformities of the skull.....	3
Nephritis	3
Lead intoxication	1
Anemia	2
Uncertain diagnosis	4

Although the greater part of the cases are brain tumor, yet a fair proportion of cases occurred in cases which the general practitioner meets. That a nephritis can produce a typical picture of choked disc has been proven at the post-mortem table, where the diagnosis of tumor, based solely on the choked disc findings, was found to be incorrect.

From an ophthalmological examination it is at times impossible to distinguish a choked disc of nephritis from one of tumor. I have seen several cases of ordinary choked disc giving the typical star figure formation in the macula which speaks so typically for retinitis albuminurica. This star figure within the last two years has been recently studied, and to Lauber is the credit of finding that it represents the lipoid substances which show up when treated with bipolarized light as found in the kidneys themselves. Cushing has recently worked up the subject of intra-ocular complications in a relation to nephritis and explains the choked disc as a result of toxic vasal motor changes in the brain, and has suggested lumbar puncture as a temporary relief from impending blindness. Unfortunately when fundus changes occur in the course of nephritis a serious stage of the disease has been entered, contracted kidney being most frequently present.

Cysticercus has an especial affinity for the third ventricle and naturally would produce choked disc. The choked disc of anemia is a temporary one and responds most favorably to iron therapy with complete restoration of vision. Choked disc also appears in pregnancy and hydrocephalus.

Finally, there is a choked disc of unknown origin which appears in young girls at the time of puberty, associated with

amenorrhea. This choked disc leads to rapid blindness within a short period of time. In two cases which I have seen there was a partial atrophy of the thyroid. Whether this condition will be eventually proven to be associated with a disturbance of some internal secreting organ or be classed with one group of pathological changes of the hypophysis which present menstrual changes disturbances is a matter of future investigation.

LACHESIS AS I FOUND IT.

BY

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(Read before the Interstate Medical Society, Binghamton, N. Y.)

As far back through the centuries as we can get the snake has been the enemy of human kind. Subtlety, jealousy and deception when found in man or woman always remind us of an old, old story. The trail of this reptile by its bite and sting unto death can be readily followed if not to its original lair, at least so far back as authenticated history goes. The deadly experience that several million ancient Israelites had in the wilderness of Arabia with this curse is not new to us. And strange, by the way, is it not, that the curative remedy Divinity provided for the snake's bite then was to look upon an object similar unto that which was causing all their trouble, viz., the image of a serpent made out of brass. Although man's experience with the snake has been such that all through the ages he knew of its killing power, yet of all these many millions of men that came in contact with it through all these centuries the first known man who conceived the thought, and proved it for the human race, that such a poisonous life-destroying agent might be intelligently used as a life-saver, was our own Dr. Constantine Hering. He procured one of the most deadly species of the snake family, the *Trigonocephalus Lachesis* of South America, and from the ejected venom made a trituration from which he, with seventeen other fellow practitioners, made the original proving upon themselves in 1828. The remedy was then used according to these proved indications at the bedside for several years, by his various fellow-practitioners, and of reports made to him, of symptoms veri-

nied, of patients relieved, diseases cured, and lives saved. Seven years after the original proving Dr. Hering made a report in the Archives of the cases treated with this remedy and two years after that, in 1838, this remedy was added to our Homœopathic Materia Medica.

In 1878 the fiftieth anniversary of the proving of this remedy, Dr. Hering called for a report from the Homœopathic Medical Profession concerning the value of this remedy at the bed-side. Over 500 responses came forth from the doctors who had used it according to the proved symptoms, and were ready to report its successes and failures.

It was interesting indeed for me to see the many names of men, whom though I never saw face to face, give their experience with this remedy at the bed-side; and to find that I too in this late day, nearly a hundred years removed from them, still find that if this same Lachesis is given to a sick patient to-day having the symptoms Lachesis produced a hundred years ago for Hering and others, now in this day, as in those days, make my patient well again. Surely the doctor who knows of the value of a remedy through others, and uses it to the help of his fellowman, is a blessing. While the doctor who discovers a remedy, or means of cure, for the ills of mankind is a genius; and if he gives the key of his discovery, with its proper use, to others, so they too may use it to bless, his work enlarges as the multiplication table, and he himself becomes a benefactor to the whole race. Such was Dr. Constantine Hering.

It is very likely that Lachesis is found in the office of every Homœopathic physician in the world, and yet up until two years ago, such preparations were attenuations made from the original triturate of 1828.

Since that time we have had given to us a new supply through a firm of homœopathic pharmacists which supply is used no doubt by a great many physicians to-day.

Do we have better results with the new preparation? Or are our results likewise good with both? I would be glad to hear of your experience in this respect.

The purpose of this paper is not to give a detailed symptomatology for that would be burdensome, but rather to bring into relief the outstanding symptoms that make up a Lachesis picture and apply them to conditions as we need them in our offices and at the bed-side.

The patients that come to our offices and need Lachesis are usually women, and the usual complaint they come to consult you about if this remedy is needed is some nervous condition depending upon some abnormal condition of their pelvic organs.

If Lachesis is going to help them they are generally better from cold. Relieved in cold weather, worse in warm weather, worse in damp weather, worse in warm spring days, this aggravation runs through the whole symptom picture calling for Lachesis.

Then, also, the Lachesis patient is sensitive to touch. Over-sensitive mentally and physically. When you examine the seat of any trouble she may have, she is very sensitive even to slightest touch, though she can bear hard pressure and really get relief from it. This is especially true in her head pains or neuralgias. She is very sensitive to pressure of clothing around neck and waist. She dresses very loosely.

A third characteristic is that her pains travel from left to right. She has not merely a left-sided pain or affection, but the traveling of her pain from left to right is peculiar to this remedy, and is of very great value. The fact that the left side is involved may call for other remedies that stand just as high up as does Lachesis in this respect. But the direction in which the pain or involvement travels is a good reason why you may expect relief from Lachesis.

One more symptom that marks Lachesis high up in the choice of your remedy in certain diseased conditions, viz., a general sense of relief after discharges from any orifice of the body. There is relief after a hemorrhage. Be it from the vagina, or rectum, or nose, or mouth, or from a suppurative middle ear, or even from free mucous discharge of the nose, or a free vaginal leucorrhoea. The patient says she feels better ever since such a discharge.

Last but not least is a general aggravation of their illness after sleep. They sleep into an aggravation, and awake with a sense of suffocation.

Dr. Hering is quoted as having a rule of practice for himself, to make an earnest endeavor to find at least three prominent symptoms of his patient, that were also prominently characteristic of the remedy he would give, from whence we get his well-known three legged chair proposition.

Thus far we have five salient Lachesis key-notes:

1st.—General relief from cold weather and aggravation from warm weather, warm applications or warm drinks.

2nd.—Hypersensitiveness.

3rd.—Left-sided affections with a tendency for pain traveling from left to right.

4th.—Relief from orificial discharges.

5th.—General aggravation of symptoms after sleep.

By far the larger portion of your office patients needing Lachesis are women, who are around forty or more. The menopause has arrived for them. They have hot flashes, and with them a full feeling, a sensation of blood surging up the back of the neck and head, often with a bursting feeling on top of the head. One minute the face is purplish in color, the next it is covered with a cold sweat. There seem to be regular heat waves coming and going for her. She feels relieved in the open air; and desires all clothing around the neck and waist very loose. She feels worse after a sleep.

Mentally her mind is rarely normal. She is either torpid and depressed or there is a tendency towards jealousy or even tempted to commit suicide, or she may be very loquacious. Fanaticism on religious subjects is often benefitted by this remedy.

Personally I have used Lachesis for some time in women whose tubes or ovaries were being threatened by a gonorrhoeal infection, and believe it to have decided value in keeping some of these unfortunate ones from the operating tables in the immediate or remote years ahead.

If he or she has a heart lesion, they are always relieved in the cool open air and feel worse after sleep, and worse from lying on the left side, with numbness extending down the left side. Mentally there is present a horror, a fear, or an anxiety. They feel as if their left chest was too full; they are conscious of having a heart. If they do fall asleep they suddenly stop breathing, as it seems to them, at which they waken with a choking feeling: fighting for breath, they tear everything loose around their necks. With these heart symptoms they often have a surging of blood in the base of their brain on waking.

In young people with heart troubles there is a sensation as if their heart was too big, though there is no real organic

enlargement present; they cannot lie on their left side, *Lachesis* cures these cases.

In dyspnoea, that is pulmonary, and not primarily of heart origin, *Lachesis* will often give splendid rest to the patient, other symptoms agreeing.

When you have a fully developed case of organic heart lesion, a dilated heart, with lost compensation, your patient is water-logged, beyond hope, waiting to die, yet feels so distressed. If those symptoms heretofore mentioned are present, give him or her *Lachesis* in repeated doses and there will come over that patient a sense of mental and physical rest, and while it will not save the life of the patient (indeed, it may hasten his departure), nevertheless it will help him to lie down and die a death that is quiet and peaceful as though he had been stupefied with morphia.

In its reputed value for aborting quinsy I have had it fail so often, and succeeded so rarely, that I have my doubts concerning its true abortive value.

At the bed-side, perhaps, the conditions which call for *Lachesis* oftener than any other, are in the lower types of fevers, where there is marked blood deterioration. This remedy has the power to so destroy the fibrin of the blood and otherwise vitiate this life-giving fluid, that when under diseased conditions you find this deep degree of blood poisoning, this remedy as a curative agent often becomes a whole life-saving station in itself.

Who of us have not seen the typhoid, the scarlet fever, the septic and the diphtheritic patients with their well-known general toxæmias as evidenced by their great prostration, loquacious delirium, purplish or ashy looking face, with subsultus tendinum, sliding down in bed, stertorous breathing, dropping of lower jaw, suppressed urine, hemorrhages of the nose, and mouth or rectum, all of these making up a picture of a low degree of general sepsis. I say who of us have not had them and seen them die as we stood helplessly by, and beheld the tragedy of young, useful and noble lives pass out. If in these desperate cases we can find besides those serious symptoms such peculiar ones as these, general hypersensitiveness or even a history of having had such a sensitiveness a day or so previous, with a general aggravation after sleep, a general averseness to warm drinks and a desire for cool air, with a dusky, brownish, dirty or even purplish look on the face, and

perhaps a peculiar trembling of the tongue when extended, in these dire cases, with these grave symptoms present, if Lachesis is given who of us have not snatched precious lives out of the very open jaws of death?

In the hemorrhages calling for this remedy the blood looks like charred straw. After such a flow of blood there seems to be a general relief to the patient. This low state of blood deterioration is common to all the snake poisons. If *Crotalus* is to be preferred to Lachesis, then instead of the dusky, brownish or ashy color of the face the patient will have a yellowish or jaundiced look. Recently laboratory research accredits the 6X dilution of Lachesis as causing marked increase in leucocytes. If this can be confirmed, we have a scientific reason for its value in these cases of sepsis.

One more condition in which I have confirmed the value of Lachesis, viz., in those advanced cases of phthisis, especially occurring in women of middle life. There is a sense of suffocation on lying down, least of all can she lie on left side. She wakes up and finds herself struggling for breath and sleeps into an aggravation. Sensitive around neck, etc. Palpitation is often an annoying late symptom. Here Lachesis often relieves the last weeks or months of suffering for the patient and allows her the blessings of a comfortable euthanasia.

Finally, if Lachesis is able to reach down so far and call a halt to the onward march of this deep degree of blood poisoning and save a life at the very brink of death, why not much more should we expect of it to arrest such tendencies earlier, long before such grave conditions have arisen? Is it because we do not look for the signs of their coming early enough? In other words, if my case is progressing and steadily moving on towards these dangerous pathological changes, could I not, if I were looking for them, find the beginning indications of Lachesis? Must I wait until my patient is down in the depths low enough, and the vital depression so great that only a deep acting remedy like one of the snake poisons can reach him? Must I wait until the eleventh hour to give Lachesis? Is it giving a square deal to this remedy? Should not we have given it earlier? Do we use anti-toxine in Diphtheria that way, and would it be fair if we did, to it or the patient?

It is, perhaps, needless to say yet I have good reason to be-

lieve, that with the patient in Murphy's position, if possible, a quart or two of saline solution allowed to flow drop by drop high up the patient's rectum, this becomes one of the best and most frequently indicated complementary measures to aid Lachesis in these septic conditions.

Furthermore, I wish to say that while I believe all this paper contains concerning the value of this great remedy in the cure and relief of the near sick, and of the almost moribund in rare cases, yet will I not trust to its sole care and control any given case of diphtheria without the use of its complement as a life preserver—anti-toxine. Indeed, the more the case begins to resemble the Lachesis picture as evidenced by the muttering delirium, by the increasing prostration and symptoms of general sepsis, and blood impoverishment, regurgitation of food, and liquids through the nose, with dark, bloody sordes of teeth and lips; the larger the dose and the oftener the repetition of anti-toxine is indicated in my judgment, as an aid to Lachesis, and thus give to it a fair chance to act and win out in the saving of a still greater number of precious lives.

**RECENT RESEARCHES IN MENTAL MEDICINE, ESPECIALLY IN
THE ETIOLOGY AND TREATMENT OF DEMENTIA
PRAECOX AND GENERAL PARALYSIS.**

BY

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THERE is probably no class of diseases where so little progress has been made in either etiology or treatment as that class which is now placed under the head of mental diseases. The chief reason for this is the lack of opportunity for study; there being to-day only a few schools where mental diseases are taught and properly demonstrated. Until within a few years no school made mental diseases an obligatory course. Another reason is that which has prevailed since the Middle Ages, the horror of insanity causing physicians and families to get rid of their insane by placing them as quickly as possible in asylums and sanatoriums.

Within the last twenty years there has been a movement toward deeper study and investigation and improved treatment of mental diseases. Pathologists have become more active in their work to ascertain the causes of mental alienation. Many have made progress and many have undoubtedly gone too far in their theories and their statements. There is also a class of pathologists who, while they may be doing some original work, expend much of their efforts in endeavoring to break down the work and theories of other men and to prove that other pathologists and therapeutically many physicians are wrong in their statements. Most of the State institutions for the insane are dumping places only for the mentally ill. These institutions, for the most part, have an insufficient corps of workers. They are unable to do any original or effective medical work, and they have no equipment for scientific work. The attendants for the most part, especially the male attendants, are untrained and often brutal in their treatment. In many large public and private institutions those in charge receive early cases of mental disturbance and watch the toxemias verge into mania, catatonia and dementia, they notice the acetone breath and are aware of the true conditions but little, if anything, is done to stay the progress of the disease and to save these individuals.

The millions now paid to caretakers in private sanitariums and asylums are for the most part wasted, for instead of going toward scientific equipment, investigation and treatment of the patients, the dollars go into the pockets of the commercial medical man. There is no branch in medicine where the patients get less for their money. There are men in private practice and a few institutions in this country who are accomplishing cures by active treatment. Drs. Edward N. Brush, G. Alder Blumer, Frederick Peterson and Henry J. Berkley are examples of the men I refer to.

Dr. Henry J. Berkley, after making a special study of the catatonic form of Dementia Praecox, decided upon the operation of partial thyroidectomy in certain of these cases. He first tried tonics of all sorts and descriptions, phosphorus compounds, especially the glycerophosphates, iron, magnese, arsenic, cod-liver oil, hyperalimentation, and lastly iodine. Of the entire list iodine was the only one that had any effect, and it seemed to intensify the symptoms, even when the dose was small (1-250 gr iodine, as iodized starch). Under the use of

iodine certain patients would wake up out of their stupor to some extent, become talkative and excited, and show increased dermatographia, more highly exalted reflexes, an increased hyperidrosis, as well as a higher pulse rate, but the mental condition did not mend perceptibly, and as soon as the drug was withdrawn they reverted to the earlier condition. . . . He also tried testicular, ovarian and thymus juices, various nuclein preparations, parathyroid, thyroid, iodothylin, epinephrin, alcoholic solution, and lecithin..

From but two of the several preparations did he obtain any effects. Iodothylin made the patients worse, as did the desiccated thyroid in the ordinary dose of five grains three times a day. As under the iodine the patient awoke out of stupor to some extent, or if the dried gland was pushed he became excited, with increased hyperidrosis and muscular and reflex reactions. The lecithin induced an increase of the leucocytosis, already present, while the red cells increased rapidly.

The patients under the lecithin improved physically, but often, when the cases were at all old, without betterment in the mental symptoms. Early cases did much better so far as the mental symptoms were concerned. . . . Together with Dr. Owensby and Dr. Schwartz he says, "We had come to the conclusion that in catatonia we had, possibly, to deal with a perversion of the functions of one of the ductless glands, in particular the thyroid body, the latter conclusion drawn from the passing similarity of certain symptoms common to both this malady and Graves's disease, and, in particular, the increased reflexes, the heightened mechanical muscular irritability, hyperidrosis, tremor, the skin changes, and profound loss of weight. Acting upon this hypothesis, we next tried the experiment of feeding our catatonia patients on small doses of desiccated thyroid, one or two grains each day, with the idea of supplying a small portion of normal gland to the bodily economy. Alternating with the thyroid, week by week, lecithin was given in the form of an alcoholic solution to keep up the leucocytosis and increase constructive metabolism."

He says, "The very excellent results that have followed the administration of the alcoholic solution of lecithin in many cases of nervous asthenia (not cerebrasthenia), as well as in a few cases of exophthalmic goitre, for of the latter malady I do not see any considerable number of examples during the course of a year, has led me to try the same remedy in a few

cases of early catatonia. Curiously, the neurasthenics and goitre cases, despite the nauseous and disagreeable smell of the alcoholic solution of lecithin, cling to the remedy as an opium habitue does to the latter drug, and never seem to tire of it until the nervous symptoms are allayed, and the gain in weight approaches the normal.

"Again, all the goitre and asthenic patients, who are on lecithin, state that an hour after the medicine is taken 'their nerves' are quiet, and for a time there is cessation of the active symptoms, such as the tremor, and a slow return after some hours."

In concluding his paper, he says, "It is possible that the secretion of the parathyroid glandules nullifies, in a way unknown at the present time, the activity of the thyroid hormone, and that the ablation, in part, of the thyroid gland, helps in promoting the function of these minute bodies. After the operation, all the blood supply that formerly went to the entire half of the thyroid body is now diverted to but a small remainder and the supply to the parathyroid glandules must be enormously increased. It would be exceedingly difficult to find eight successive cases of catatonia, that recovered their mental integrity under any previously known treatment, as our eight partial thyroidectomy cases have done." . . . "The thyrolecithin treatment is productive of constant results only in the prodromal state. It acts probably by increasing constructive metabolism, but may also act by nullifying the thyroid hormone, just as iodine increases its activity. Partial thyroidectomy may be of avail in cases of catatonia only before organic changes, such as have been described by Alzheimer, and more recently by Zalplachta, have begun in the brain tissue."

Dr. Berkley has ascertained that most of the lecithin on the market is inert and he now has Hynson, Westcott & Co., chemists, of Baltimore prepare a lecithin which is reliable and which I have used for the past eight months. A drachm of this solution represents 1-26 of a grain of organic phosphorus. Lecithin is not indicated after a person has passed fifty-five or sixty years of age. It was first isolated about 1870, by Hoppe-Seyler who succeeded in freeing it from its constant association with phosphorised albumins--nucleo-albumin and nucleo-proteid. As it occurs in the yolk of egg and brain matter, it is usually associated with nucleo-

proteid, but when isolated it is proteid-free. The first change lecithin produces is to increase gradually the number of red corpuscles. This is followed by an increase of appetite which sometimes becomes excessive.

Furst, in 1903, was the first to publish any results with the employment of lecithin in cerebral exhaustion. Kossel claims that lecithin promotes the excretion of uric acid as a result of leucocytosis. It has proved to be of benefit in neurasthenia and neurosis in general; rickets, infantile atrophy, tuberculosis, pancreatic diabetes, anemia and chlorosis. The best results, according to some authorities, are had from lecithin made from sturgeon's eggs. A patient in taking the yolks of hen's eggs for the lecithin in them would over-burden his digestive apparatus with too great an amount of proteid as an enormous number would have to be taken in order to get a sufficient quantity of lecithin.

In June, 1907, after having experimented with these remedies for eighteen months, two patients were operated on under Dr. Berkley's direction by Richard H. Follis, M. D. "Both patients," reports Dr. Berkley, "recovered their mental integrity and have become useful members of society." Following these operations of partial thyroidectomy were many others. I have seen some of these cases only a few months ago and they still remain well, apparently normal.

Partial thyroidectomy has been tried by Kavel, of Chicago, and by Blumer, of Providence, with negative results, but in the face of the recoveries that Dr. Berkley reports, their work does not prove that partial thyroidectomy is not going to relieve a great number of selected cases.

Much depends upon the technique of the operation according to Dr. Richard H. Follis, who gives the following description of the operation:

First—Transverse incision of Kocher through the skin and platysma muscle.

Second—Vertical incision of the fascia in the middle line, and high division of the omo-hyoid and sterno-hyoid muscles between clamps. These clamps remain in place until the muscle sutures are placed.

Third—Sterno-hyoid muscle is retracted to the outer side, and, if necessary, divided transversely.

Fourth.—A resection of approximately three-fourths of the anterior portion of the lobe. The branches of the superior

and inferior thyroid arteries are clamped only after they enter the gland and a crescentic shaped portion of the lobe representing the posterior quarter of the original lobe is left after the resection is completed. After all the hemorrhage has been controlled by ligatures, the divided muscles are sutured with fine silk sutures and the skin with continuous fine silk. A generous drain of gauze surrounded by rubber tissue is left in the middle line. This is placed to the remaining portion of the lobe.

I am going to give you an interesting illustration of the relation between the thyroid and the mental condition in the history of a case of the catatonic form of dementia praecox in which I was consultant. In 1907, I had advised a partial thyroidectomy on this particular case. I went to Baltimore that year and in 1908, in consultation with Dr. Berkley, urging the parents and Dr. Robert Carroll, of Asheville, N. C., the attending physician, to consent to a partial thyroidectomy, even though dementia had then set in.

A year after the last consultation, or on March 13, 1909, Dr. Carroll writes, "I have a strange tale to relate. On January the sixth, Mr. L. (the patient) who had been much as you saw him in November, complained of his throat; upon examination it appeared much as would a case of suppurative tonsillitis. This was Wednesday. Thursday he remained in bed, took liquid diet, complained some of headache and throat was quite inflamed. When I saw him Friday at noon, he was having considerable difficulty in swallowing, and the sublingual and submaxillary glands were involved. That evening he claimed he could not swallow. The swelling of the floor of the mouth increased decidedly during the night, and there was evidently an infection involving the areolar connective tissue of the floor of the mouth. For several hours Saturday he was more comfortable.

At this time a diagnosis of Ludwigs Angina was made, and he was moved to a hospital for operation. A hurried tracheotomy was necessary, as a result of an interference of respiration. The entire floor of the mouth was explored and a moderately large abscess found anterior to the right tonsil. It was forty-eight hours before he could take nourishment. Five days after the operation, his temperature was normal. A large granulating surface with a wounded thyroid isthmus, was the surgical situation.

Mentally a modified miracle was wrought, and for three weeks Mr. L. was more himself, according to his father's statement, than he had been for nearly seven years. While he did not approach in mentality his standard at the time of taking his Harvard degree, for the time being his whole character was altered; he was gentle, considerate, reasonable, very social, quite logical and relevant. His father and aunt spent three weeks, seeing him much of the time, and they were happy weeks for them all. During the last month, however, with practical closure of the wound, he has gone through a rapidly progressive return to his former condition." . . . "Much mentally we thought was destroyed, has simply been inhibited, and as a result of this peculiar and rather rare attack, I feel that the subject of operation for partial thyroidectomy has been opened in a most convincing manner. I am, therefore, planning to consult with Mr. L. early in May, by which time I trust the condition of his throat may render deliberate interference feasible."

We held a consultation in Baltimore, but I am sorry to say that the family decided against an operation.

Dr. Berkley says, "Exophthalmic goitre and cases of catatonic dementia praecox have, usually, an enlargement of the thyroid gland, the bruit over the neck, the high tension and rather rapid pulse, accentuation of the second aortic sound, wide pupils, increase of the superficial and deep reflexes (mechanical muscular excitability or electric excitability are not given in the history) and lastly a moderate small cell lymphocytosis." He also says, "In the early stages of catatonia there is a lymphocytosis that culminates at the period of the stuporous stage, after which the blood slowly returns to a normal state. We have found that it is inadvisable to operate on these cases after the lymphocytosis has disappeared."

The influence of the thyroid gland, according to McDonald, causes disturbances of menstruation. Galante reports three cases of goitre in which there was marked change in the menstruation following galvanization of the thyroid gland.

Disturbance of the thyroid is now claimed to be in many cases the cause of tachycardia, nervous irritabilities, and insomnia, of many of the hot-flashes, restlessness and sweating in the menopause as well as disturbances of nutrition and toxemias due to disturbed nitrogen metabolism. Even epilepsy and mental alimentionation can, undoubtedly, be brought about by

the hypersecretion of the thyroid gland causing an autointoxication. The thyroid gland is stimulated by alcohol, iodine, arsenic, strychnia and sexual excitement and when the thyroid atrophies and hyposecretes sexual desire is usually lost. Parathyroid extract has been given with benefit to certain cases of paralysis agitans. It is not yet ascertained whether the disturbances of the parathyroids are the cause of toxemia of pregnancy. Certain it is that the thyroid gland normally hypertrophies during pregnancy. In a recent article in the *Lancet-Clinic*, the author claims that it plays an important part in the increased nitrogenous metabolic processes incident to that state. He also claims that the failure of the thyroid gland to normally hypertrophy during pregnancy is followed by insufficient metabolism, and results in various forms of toxemia of pregnancy.

Many of you have probably followed the "Treatment of Thyroidism by a Specific Cytotoxic Serum," as published by John Rogers, M. D., and S. P. Beebe, M. D., of New York, also the combined treatment of both the anti-serum and the pure thyroid proteid. By these treatments these physicians have been able to cure some cases and help a great many others, under the following heads: "Typical exophthalmic goitre in early stages, including the incipient, the mild, the severe, and those extremely severe forms which develop very rapidly and have been described as the acute toxemic type, resembling malignant endocarditis," "Atypical forms of thyroidism," "Patients with nervous and vasomotor signs of thyroidism, who complain of a more or less constant headache accompanied in most cases by nausea and abdominal discomfort," "The psychopathic cases, the mental disturbance having no definite relation to the severity or type of thyroidism."

A dose of the thyroid-proteid is about 1-50 grain or less daily and of the serum 5 minims. every fifth day. They claim that the serum has a specific effect in neutralizing the toxic action of the thyroid secretion, that as a therapeutic agent it gives results which cannot in many cases be attained by any other medical means. They say, "Not all cases presenting symptoms of thyroidism can be treated successfully with serum, because not all cases are purely hypertrophied in origin. The rapid amelioration of symptoms in the acute toxic cases, similar in most respects to the well accepted instances of neutralization of toxin by antitoxin, is a weighty argument in favor

of believing the symptoms to be due to the toxic effects of hyperthyroidism."

Dr. John Rogers writes me of one case of pronounced psychosis associated with Graves disease which recovered under his care after feeding the case with Thyroid Globulin (human) which is the physiologic opposite of the antiserum. After considerable experience I agree with the suggestion of Dr. Rogers that Trypsin and Holadin have a beneficial effect on nervous patients and that Trypsin, especially, may prove a mild hypnotic and sedative. The difficulty has always been to obtain reliable preparations. As Dr. Berkley has found that the commercial lecithin is apt to be unreliable so has Dr. Beebe found that commercial glandular extracts are often inert. I have, therefore, obtained lecithin from Baltimore and glandular extracts from the Loomis Laboratory, 414 East 26th Street, New York City, when possible.

Dr. William M. Berkley, of New York, in an article in the "*Old Dominion Journal of Medicine and Surgery*," for April, 1909, gives Gley, of Paris, the credit of being the pioneer in working out the Physiology of the Parathyroids, but this is incorrect for the importance of these glands was first recognized by a Swedish writer named Sandstrom, in 1880. Berkley's article on "Recent Studies in the Physiology and Pathology of the Parathyroid Glands" is well worth reading. He gives the method of preparation of the nucleo-proteid as prepared by S. P. Beebe, M. D., and also refers to W. G. McCallum, M. D., who has made some interesting experiments, and says, "Moreover, it has been found that cocks and hens, when fed on an exclusive meat diet for a few months, develop a remarkable hypertrophy of the parathyroids, and Beebe has shown that dogs on a heavy diet prior to the parathyroidectomy develop more speedy and more violent symptoms of tetany than those fed on other food or those kept fasting."

Carlson and Woelfel, in an article on the "Internal Secretion of the Thyroid" in the "*American Journal of Physiology*," for April, 1910, say, "While the feeding of thyroid preparations to mice poisoned with acetonitrile after the method of Hunt confirmed the results of Hunt that the poison was neutralized by the thyroid preparation. The thoracic lymph produced no such effect." . . . "The authors favor the detoxication hypothesis of Cyon as explaining the fixation of iodine in the thyroid, that organ acting as a special filter to

retain iodine which would otherwise be toxic to the organism. The iodine may be deposited in connection with or without colloid. The iodine absorbing power appears to be a function of the thyroid in a special degree and is not exhibited by the colloid of other organs."

The thyroid gland has, besides its internal secretion, a colloid substance. The colloid is peculiar in that it is an intercellular deposit, and it is claimed that it is the store-house for some of the activities of the thyroid gland and it stores iodine for the proper functioning of the gland.

S. J. Metzger, M. D., of New York, in an excellent article written in the *Journal of the A. M. A.*, April 30, 1910, on "Animal Experimentation in Relation to our Knowledge of Secretions, Especially Internal Secretions," after giving a history of what has been done in researches along this line since the sixteenth century, says, regarding the thyroid, "George Murray, in 1891, established the important fact that subcutaneous injection of thyroid extract in man is capable of abolishing all the symptoms of myxedema," and Baumann, in 1895, made the important discovery that the thyroid contains iodine in an organic compound which some believe to be closely connected with the main function of the gland. It was further found that the thyroid extract exerts a certain influence on the resistance of some animals to some poisons and that this influence is in proportion to the iodine content of the gland."

M. Dide (of Rennes), *Review of Neurology*, April 15, 1905, in an article, "Dementia Praecox is a Subacute or Chronic Mental Syndrome of Toxic-Infectious Origin," says, "In the hebephrenic and catatonic varieties of dementia praecox, chronic enteritis is common. The liver showed fatty degeneration in all cases examined by the author; in fifteen out of thirty-two cases this degeneration was extreme. The decrease of urea observed in catatonia is due to hepatic insufficiency. In the paranoid form the condition of the liver is very variable. In hebephrenia and catatonia tuberculosis is very common, whereas among the other inmates of asylums tuberculosis is much rarer. Dide concludes that hebephrenia and catatonia form a toxic-infectious psychosis. He does not discuss the diagnosis of the cases upon which he bases his results."

In a paper read by Mayo at the Boston Medical Library, April 3, 1907, on "Exophthalmic Goitre," he described his operation for the extirpation of the thyroid gland leaving the

parathyroids. I asked him if he considered that hypertrophy of the thyroid caused autointoxication, which in its turn caused mental alienation. He told me he considered this true and that when the gland was removed mental improvement was usually marked in from five to seven days—an improvement equal to leaving off overdoses of strychnia.

Ramadier and Marchand in *L'Encephale*, August, 1908, in an article on "The Thyroid Gland in Insanity," say that after examining the thyroid gland in 278 patients dying in four of the French asylums (Villejuif, Rodez, Rennes, Blois), they came to the conclusion that it was impossible to establish any possible relation between the thyroid change and the form of mental disease from which the patients suffered.

In the *Review of Neurology and Psychiatry* for March, 1910, under the heading: "On the Effects of Ablation of the Thyroid and Parathyroid Glands of Sheep," is the following by P. Rossi, "The results obtained may be thus summarized: Sheep tolerate well partial parathyroidectomy, i. e., extirpation of three parathyroids—that is, one internal and the two external. The extirpation of four parathyroids, the two external and two internal, is occasionally well borne, but on other occasions death supervenes in a series of convulsive attacks."

In the *Review of Neurology and Psychiatry* for January, 1910, in reviewing an article on, "The Pathological Anatomy of the Thyroid Gland and the Hypophysis in Certain Mental and Nervous Diseases," Wilson says, "The diseases were senile dementia, cerebral arteriosclerosis, mental confusion, general paralysis, epilepsy, idiocy with or without epilepsy (total, 29). In practically every case the thyroid gland was abnormal, the common lesion being sclerosis. The hypophysis was much less affected."

In regard to the blood changes in the catatonic form of dementia praecox, Berkley says, "Blood alterations are more constant in catatonia than in any other form of mental malady, hebephrenia and paresis excepted. In the earlier periods of the disease a leucocytosis of from 11,000 to 18,000 per cubic millimetre is fairly constantly found, which may rise at the beginning of the stage of stupor to a much higher figure (30,000 to 40,000). The relative proportions, between the several forms of white corpuscles, are also changed, and the percentages of childhood are again attained. The small lymphocytes

are high, the large forms are unaltered or low (occasionally the reverse condition is found, and the percentage of the large lymphoid cells may be as high as 40 per cent. in one instance up to 43 per cent.), the neutrophiles vary from slightly below normal to a low point (48 to 50 per cent.), while at certain times the eosinophiles are low, normal, or increased."

Francis M. Barnes, Jr., M. D., of the Sheppard and Enoch Pratt Hospital, Towson, Md., in a paper published in the *American Journal of Insanity*, on "A Clinical Study with Blood examinations of Two Atypical Cases Related to the Dementia Praecox Group," in April, 1909, comes to the conclusion, "First, That a hyperleucocytosis has been noted in these patients, coincident with the onset of the 'abnormal' phases, and, second, that, so far as this work has gone, no fully satisfactory explanation for this variation has presented itself."

Pighini and Paoli, in an article on, "A Special Type of Erythrocyte in Dementia Praecox," after making certain experiments demonstrating the changes in the blood, claim that their discovery supports the theory of Kraepelin that dementia praecox is due to a disturbance of bodily metabolism."

In the *Review of Neurology and Psychiatry* for March, 1909, is a review on Dementia Praecox: "A Composite History of Two Hundred Cases, with Blood Findings in Fifty," by H. D. Purdum and R. E. Wells. The paper is based on a study of two hundred patients suffering from dementia praecox. Differential blood examinations were made in twenty-five of the hebephrenic type. The urine in forty-four out of fifty cases showed an excess of indican. From the summary made in the tabulation of these fifty cases the authors conclude that, "The prevailing mild leucocytosis and the increase in the percentage of the eosinophiles and large mononuclear cells with a low neutrophile count is of considerable interest. The facts enumerated in reference to the blood and urine point strongly toward a physical basis for the disease, possibly an autointoxication of intestinal or glandular origin."

Further investigations by R. E. Wells, M. D., are published in the *Journal of the A. M. A.*, January 22, 1910, under the head of "Artificial Increase of Eosinophile Cells in Dementia Praecox." He says in this article, "Recently several cases of catatonia have been reported as having been cured or improved by partial extirpation of the thyroid gland. It was for this

reason that it was thought that thyroidectin might exercise the same influence on dementia praecox. No improvement in any of the cases was noted, but it was observed that certain changes in the blood took place in most of the cases, which were characteristic. The blood of ten cases of dementia praecox was examined at intervals of a few days during the administration of the drug. Five cases of catatonia and five cases of hebephrenia were taken at random." . . .

"The most notable variations in the blood are the increase in the eosinophile cells in 90 per cent. of the cases and the decrease in the neutrophiles, the latter, as a rule, showing a greater decrease in proportion than the rise in eosinophiles."

"The etiology of dementia praecox is still obscure. Possibly many factors contribute to its causation. From the experiments with thyroidectin it might be theorized that the disease is due to perverted function of the thyroid gland, for we know that at certain periods in the course of hebephrenia and catatonia the eosinophile cells are normally increased. If, therefore, thyroidectin produces the same effects on the blood that is observed normally in many cases of hebephrenia and catatonia, it would seem rational to suppose that perverted thyroid secretion is one factor in the etiology of dementia praecox."

William F. Kuhn, A. M., M. D., Superintendent of State Hospital, No. 2, St. Joseph, Mo., in a paper on "Toxemia of Insanity," *Journal of the A. M. A.*, April 11, 1908, says: "Too much evidence has been produced in favor of the theory of autointoxication and toxemia to be rejected without investigation. That the condition known among American authorities as primary dementia, and by the Germans and French as dementia praecox, is the result of a toxemia, seems to be fairly well established. That acute and agitated melancholia and mania are caused by profound changes in the metabolism of the body by some toxic agent, an examination of the blood changes seems to justify." . . .

"The blood changes that are coincident with the clinical changes and the decrease and final disappearance of the eosinophiles in the patients who improved, and in the patient who seemingly recovered, together with the leucocytosis and the eosinophilia in patients who had relapses point to the scientific fact that there is a physical basis, an autointoxication of toxemia, in insanity."

John Macpherson, M. D., F. R. C. P. Ed. in the *Edinburgh Medical Journal*, July, 1905, in Morrison lecture, No. 4, delivered before the Royal College of Physicians, Edinburgh, on "Insanity," states in his summing up, "The confusional insanities are due to the action of poison on the nervous system, especially the brain. Their type is delirium, no matter whether the delirium is acute and of short duration, or chronic and prolonged. They all result in an injury to the delicate structure of the brain cortex. That injury is more or less severe, according to the nature of the poison, and according to the resistance which the brain cells offer to the action of the toxin. If it is asked, 'How do we know that there is a poison present in the blood of the patients suffering from confusional insanity?' I reply that, 'Had we no other proof than the symptoms, the pathological results, and the course of the disease, there could scarcely remain a doubt as to its existence.' "

We are indebted to Dr. Lewis Bruce of the Murthly Asylum for direct proof of the presence of a toxin which in all probability is the direct cause of the symptoms of this group of affections. There are two main diagnostic symptoms of infection of the system by toxins, namely, pyrexia or fever and leucocytosis. In some intoxications both are present; in others, e. g., phthisis and typhoid fever, there is pyrexia but no leucocytosis. In others, there is leucocytosis but no marked pyrexia. To this latter group belong the confusional insanities which I have named subfebrile.

Dr. Bruce's description is so important that I have asked and received his permission to quote some extracts from his published writings. It should be explained that in normal persons the number of leucocytes per c.mm of blood is 6,000 to 10,000—they should not exceed 12,000. Early in the disease and coinciding with the hyperleucocytosis (which was found on admission to be from 15,000 to 17,000) the percentage of polymorphonuclear cells was frequently above 70. Let me explain that an increase in the number of polymorphonuclear cells is considered a certain sign of toxæmia. Later in the disease during relapses, it is quite common to get a hyperleucocytosis of 20,000 to 30,000 with a polymorpho-nuclear percentage of 80 or even higher.

A relapse generally is preceded by a fall of the leucocytosis to 10,000 or 13,000 with a low polymorpho-nuclear percentage. As the excitement increases the leucocytes gradually rise, and

the percentage of the polymorpho-nuclear cells also rises until the attack reaches its height. When such a case recovers, the leucocytosis remains high. A notable feature of all these diseases is the fact that, upon recovery taking place, a hyperleucocytosis is present for months and even years after leaving the asylum. In cases which do not recover, but become chronic leucocytosis falls, and the percentage of polymorpho-nuclear cells is often below fifty. This is a startling fact, the importance of which is far reaching. The object of a hyperleucocytosis is, of course, protective. The leucocytes increase in the blood for the purpose of protecting the system from the encroachments of the poison. Their role is always protective. The intoxication of the system does not cease when a patient has recovered from the mental disturbances manifested by the continued leucocytosis. When, however, the poison has done its worst, down come the leucocytes. The struggle is over; victory remains with the forces of destruction. Similar changes in the leucocytes and other blood constituents, indicating indubitably a greater or less intoxication, have been shown by Dr. Bruce to exist in general paralysis, hebephrenia, and even in alcoholism. This confirms Kippel's contention, who long ago held that the toxin in alcoholism was a secondary one, and that alcohol only predisposed the system to invasion by other poisons from the alimentary canal."

Dr. Lewis Bruce, whom I visited at the Murthly Asylum, Scotland, in 1905, then told me that in catatonia a period of stupor is preceded by a rise of leucocytosis from 32,000 to 60,000 at the onset, that a count must be made every day, for often the rise is only for one day.

He further notes that in the cases which recover the polymorphs and neucli percentage remain high. If it falls to seven and keeps about there, little hope of recovery can be held out in either cases of catatonia or acute mania. At the onset leucocytosis was high and the polymorphs increased, and when the attack fully develops leucocytosis still rises and also polymorphs, 70 to 80 per cent. The patient may then appear apparently well for a time but when the recovery is complete the leucocytosis remains high, but the polymorphs lower, 60 to 70 per cent.

He divides catatonia into three stages; first, the acute stage, confusion, second, the stuporous stage, third, the manic stage. He has never seen a case recover without first going through

the stuporous or second stage. He showed me on a slide the bacillus that he had isolated in cases of catatonia, also the bacillus he had isolated in acute mania. The bacilli are agglutinated. The diet he prescribed in cases of catatonia contains no meat, no eggs, but mainly milk and potash water. I saw one mixed case of catatonia and general paralysis in which he injected in the groin 2 cc. of nucleus acid to cause abscess. On September 3, 7, 10, 14, 17, 24 and on the 28th, 3 cc. On October 2, 2 cc, October 5, 3 1-2 cc., October 8, 3 1-2 cc. This case improved greatly.

Dr. Bruce, at Murthly, and Dr. Clouston, at Morning Side, told me they never allow an acute mental case to pass into dementia without first giving thyroid, 60 grains per day, for four or five days, producing a severe fever. In certain cases they abort dementia after it has made some progress by this treatment. I have followed this treatment in a few cases with some success. The diet for the acute case is soup, four custards a day, each containing four eggs and one and a half pints of milk. Hyoscine they never give except hypodermically. Bromide, iodide, ergot, lime water, pepsin and oil are given as necessity requires. Warm baths at night are prescribed in all cases of insomnia.

In 1905, on my visit to Claybury Asylum near London, I found that Dr. Robert Jones was using a cap of hydrogen in cases of dementia praecox and that he had used this treatment for some years with a great deal of benefit.

In 1907, I visited Dr. C. Jung, at Burghölzli near Zurich, Switzerland, and attended some of his clinics. I will only touch upon his work. Dr. Jung in his experiments conducts an electric current of about two volts through the human body by means of poles applied to the palms. A galvanometer of high sensibility is introduced into the circuit, and a careful watch is kept upon the galvanometer as tactile, optic, or acoustic irritations of certain strengths are applied to the subject. He finds that commonly the galvanometer shows an increase in the amount of the current, i. e., a lowering of the electrical resistance of the body. It was noted that the action of the galvanometer was often in direct relation to the intensity of the resulting physical feeling-tone, rather than to the strength of the irritation; further, the inconstancy of the galvanometer often did not occur until from one to six seconds after the perception of the irritation. Veraguth found "that often the

mere announcement of irritation caused a marked response, and concluded that feelings were objectively represented in the experiment."

In the *Journal of Insanity*, No. 3, Vol. 65, the work done in the Kantonstalt, Burgholzli, Zurich, under Prof. Bleuler, where Dr. Jung is also, is stated as follows: "The cases of Dementia Praecox were received in Burgholzli from January 1, 1898, to December 31, 1905, and were 647 in number, 342 women and 305 men, of whom 84 women and 69 men are still in the institution. One hundred and thirty-two patients have not been under observation long enough to allow a definite prognosis to be made, and are, therefore, not considered in this article. On discharge the cases were divided into three groups, these being light, medium, and severe dementia."

C. M. Campbell, M. D., in an article on, "Modern Conception of Dementia Praecox," says, "Jung, of Zurich, has shown that in many cases one may penetrate the trivial and fantastic form of hallucinations and delusions and trace in them the expression of a serious and important content; the distorted behavior and trends of thought of the patient may often be shown to bear a vital relation to the previous life of the individual. Owing to this analysis, Jung has given a psychological meaning to many symptoms which previously were, and by many still are, considered to be the meaningless expression of the activity of disordered nerve tissue, incapable of any analysis along the lines of normal psychology." . . .

"When we understand better the development of cases of dementia praecox, the soil upon which it is most likely to arise, the educational and social factors which appear to influence it, the nature of the troubles which seem to precipitate it, the physical disorders which accompany it, we shall perhaps be able to aid more effectively the development of those individuals who give evidence of ominous constitutional traits, and be able to contribute more guidance towards the mental health of the community."

At present I am particularly interested in and am making some experiments with the pituitary gland. We all know the hypertrophy of the thyroid means atrophy of the pancreas and pituitary and atrophy of the thyroid results in the enlargement and increased action of the pancreas and pituitary. These relations also exist between other glands, suprarenals, liver, testicles, ovaries, etc. As the thyroid atrophies after fifty and

therefore furnishes a smaller amount of baso dilate substance, arteriosclerosis sets in. In many cases of suprarenal disease this substance is increased, high blood pressure is the result with consequent arteriosclerosis, or as one author puts it, "Any disease that interferes with the activity of the thyroid gland or any disease that stimulates the suprarenals may have as its ultimate consequence arteriosclerosis, so also, the disease which disturbs any of these glands may affect the pituitary gland as they all seem to be dependent one upon the other."

In the *Review of Neurology and Psychiatry* for March, 1910, is the review of an article on, "Hyperpituitarisme et Hypopituitarisme," by O. Laurent. This is a précis of the current views as to the structure and functions of the hypophysis. After a short description of its anatomical subdivision into an anterior lobe containing chromophile cells, a pars intermedia, and a posterior lobe mainly consisting of neuroglia, Laurent recalls the development of the gland and its forms in lower organism. The infundibular portion of the gland contains a substance which raises the blood-pressure to a degree far exceeding that produced by adrenalin; it also stimulates the contraction of other non-striped muscles, e. g., the uterus and the intestine. Total extirpation of the gland is fatal in dogs. Partial extirpation of the anterior lobes produce adiposity, which may be accompanied by polyuria, transient glycosuria, alopecia, diminution of sexual activity, and even atrophy of the testicles or ovaries. Laurent recalls the chief local symptoms of pituitary tumor, notably the affections of ocular muscles and of the optic chiasma.

In the paper read at the Sixteenth International Medical Congress, held in Budapest, Hungary, September, 1909, by Oliver T. Osborne, M. D., on "Disturbances of the Internal Secretions Clinically Considered," he says, "The whole of the gland cannot be removed without causing death within twenty-four hours, but, if a certain part is left, death does not occur."

In an article in the *Lancet-Clinic* for January 1, 1910, on "Anesthesia," by F. Hoeffler M'Mechan, M. D., in which he advises giving pituitary extract in shock after operation, he says, "Bell's experimental experiences with rabbits, and his clinical observations on the use of pituitary extract in man, lead him to the peculiar conclusion that while the drug has

apparently little or no clinical effect when used in normal conditions, it has a surprising potency in raising blood-pressure in such subjects as are already in a condition of shock from profuse hemorrhage or vasomotor paresis." . . .

"Salines must be relied upon, particularly in shock from hemorrhage, to provide a sufficient circulating medium, and to maintain the vasomotor improvement secured by the use of the pituitary extract. The average adult dose is 1 c. cm. of the extract, previously sterilized by boiling, and given intramuscularly by hypodermic injection, to prevent local ischemia from vaso-constriction of the peripheral circulation. The drug is effective with almost the rapidity of nitroglycerine, and while its potency extends over several hours, the dose may be repeated in an hour, if necessary.

During his clinical experiences with pituitary extract in combating shock, Bell found that flatus generally passed from the bowel in from one to two hours. This fact led to the use of the extract in intestinal paresis, pseudo-ileus after Caesarean section and laparotomies, and in the early stages of suspected intestinal obstruction, with constant and emphatically favorable results." . . .

"The aniline bases found in the chemical analysis of pituitary extract, bear a striking resemblance in the similarity of chemical formulae to those of adrenalin and ergot. While the extracts from the hypophysis portion of the pituitary have been shown to cause slowing of the heart and prolongation of the systole." . . .

"The pituitary seems to be closely related in its functions to the thyroid gland; when the latter is diseased the hypophysis often becomes hypertrophied, and when the pituitary is diseased the thyroid has been found hypertrophied." . . .

"As has been stated above, the thyroid can supplement, and perhaps does so frequently, the work that the pituitary should accomplish. It seems probable in every case of gigantism that the pituitary hypersecretes, and that this extra secretion stimulates an enormous bone growth. If this secretion is normal and simply increased in amount, and this extra secretion begins during the period of adolescence, a giant is the result. If on the other hand, this hypersecretion begins after the full growth of the body has been attained, irregular bone growth and consequent deformity will follow, and a typical acromegaly will develop." . . .

"There is no proof of the ability of any drug to stimulate the secretion of the pituitary though it is probable that both pituitary substance and thyroid substance may stimulate it."

Dr. Adler, pathologist at the Danvers State Hospital, is making a special study of underlying physical condition associated with the inception and advance of mental disorder. This will include examinations of urine, feces, gastric contents, blood, cerebro-spinal fluids, and glandular secretions. The field in the study of early cases is not as great in the Hospital for the Insane as in the Dispensary connected with the General Hospital or in private practice, for Dr. Page, in giving the histories of his patients, states that prior to 1910 the average known duration of mental disease before admission to said hospital was over two years.

Dr. John Turner, in the *Review of Neurology and Psychiatry*, for June, in an article on, "A Case of Abscess of the Pituitary Body, Probably of a Gunmatous Nature," says, "In fact, the appearances in general have been very similar to those noticed in this woman, and it should also be noted that the symptoms in the catatonic form of dementia praecox are often of the nature of coma, stupor, or drowsiness; this leads to the suspicion that in this form of mental disorder an interference with the functions of the hypophysis may be a casual factor." . . .

"It may help to increase our knowledge concerning the very important role this seemingly insignificant little gland plays in the normal physiology of the central nervous system, and possibly shed some light upon the relationship between this body and the brain in certain forms of dementia praecox."

No author whom I have run across has experimented with the pituitary extract for under-physical and mental development of children. If giantism and over-grown extremities are the result of hypersecretion of the pituitary, I argue that there is reason to believe that dwarfishness and under-development is due to the hyposecretion. I, therefore, selected several cases of under-developed children; and of those selected all but one have improved.

The most marked improvement was in the case of a boy of fifteen who was sent to me by Dr. Schauffler, of Lakewood, N. J., last February, 1910, for observation and advice. The boy had not developed physically since he was eleven and was backward in mental development. He had violent outbursts

of temper followed by apparent sorrow. He had many signs of degeneracy, including the Scaphoid Scapula of Graves. I placed him under the care of Dr. Joel E. Goldthwait to help correct these and after consultations with Drs. Henry J. Berkeley and Walter Fernald, I put him on Pituitary Extract and Thyroid, alternating. He very soon began to improve in every way and since March has grown three and one-half inches and developed all over in proportion and his attacks of temper have almost disappeared.

Solomon Solis Cohen, M. D., of Philadelphia, has used preparations of the posterior lobe of the pituitary gland, topically and systematically, for the rose cold or vernal hay fever, and for asthma with favorable results.

In an article in the *Review of Neurology and Psychiatry* for April, 1910, on "Adenoidism and Hypophysis," Poppi says, "In 1898 Massini found that tonsillar extracts increased the blood pressure, and put forward the theory that adenoidism might be due to loss of some substance normally produced by Lushka's tonsil. Simoni investigated the subject of cretinism in the *Vale d'Aosta*, where there are also many cases of 'adenoids,' and convinced himself of the probability of a common etiology. Arslan, and later Holz, recorded cases of cure of exophthalmic goitre by removal of adenoids. Spieler and Escherich have also written on the same lines. Poppi has recorded two cases of Basedow's disease, one of glaucoma, and three of skin pigmentation with epistaxis, etc., in which improvement took place after removal of adenoids. Arai has, by injection, traced the communication between the cerebral hypophysis and the periosteum of the inferior surface of the sphenoid. In mounting from its seat or origin to the sella turcica the cerebral hypophysis leaves behind a trace of tissue along its course, just as the thyroid gland may do, and Citelli has traced the vascular connection between the adenoid growths and the cerebral hypophysis in children."

In an article in the *Review of Neurology and Psychiatry* for April, 1910, on "Eosinophil and Basophil Adenoma of the Pituitary Body," J. Erdheim says, "I have recorded two cases of adenoma of the pituitary body. In the first, occurring in a woman 42 years of age, the most prominent clinical features were diabetes mellitus and exophthalmic goitre. The post-mortem revealed extensive lesions of the viscera, pyelonephritis, atrophy of the internal genitals and medulla of the supra-

renals. In the anterior lobe of the pituitary a small adenoma one and one-half mm. in diameter was found. Microscopically it was composed exclusively of basophil cells, which resembled the basophil cells of the normal anterior lobe in all respects save that they were smaller and contained no fat droplets.

"In the second case, a man of 43, there were mental symptoms, some enlargement of the extremities, but no optic changes. A diagnosis of acromegaly was made. Death resulted from pyaemia. Evidences of syphilis were present. The pituitary was enlarged, and the anterior lobe contained a sharply defined tumor of an adenomatous character. Unlike the tumor of the first case, this one consisted of eosinophil cells which closely resembled the eosinophil cells of the normal anterior lobe."

Dr. Harvey Cushing, of Baltimore, in the *American Medical Journal* of July 24, 1909, in an article on, "The Hypophysis Cerebri," says, "Regarded by the ancients as an organ which discharged pituita or mucus into the nose, and by most scientists of the past century as a mere vestigial relic of prehistoric usefulness, our first insight into a possible functional activity of this gland came from the laboratories of the modern comparative anatomists and embryologists, with many of whom it has been a favorite object of research." . . .

"Rathke, in 1838, described an invagination of mucous membrane, supposedly arising from the anterior end of the foregut—since known as Rathke's pouch—and correctly attributed to this origin the epithelial portion of the pituitary body, which before this time was thought to be wholly derived from the brain. It remained for Gotte and Balfour and Mihalkovics, in 1874 and 1875, to show that the invagination described by Rathke was derived from the embryonic buccal cavity rather than from the primitive gut, and hence was of ectodermic rather than of entodermic origin." . . .

"It would appear, from various investigations on the physiology of the hypophysis that the extract of the physiologically active posterior lobe, supposedly the most important part of the gland, may be actually harmful when injected, and yet after this portion of the gland has been removed there is no apparent disturbance with the physiologic balance of the body. On the other hand, the supposedly inactive anterior lobe cannot be removed in its entirety (leading to a condition

of apituitarism) and life be long maintained. This portion of the gland, furthermore, seems primarily to be associated with the growth of the body, with the metabolism of fat, with sexual activities, and to be bound up in ways which as yet are symptomatically obscure with the function probably of all the other ductless glands of the body." . . .

"Two conditions, one due to a pathologically increased activity of the pars anterior of the hypophysis (hyperpituitarism), the other to a diminished activity of the same epithelial structure (hypopituitarism), seem capable of clinical differentiation. The former expresses itself chiefly as a process of overgrowth—gigantism, when originating in youth, acromegaly when originating in adult life. The latter expresses itself chiefly as an excessive often a rapid deposition of fat with persistence of infantile sexual characteristics when the process dates from youth, and a tendency toward a loss of the acquired signs of adolescence when it first appears in adult life. Experimental observations show not only that the anterior lobe of the hypophysis is a structure of such importance that a condition of apituitarism is incompatible with the long maintenance of life, but also that its partial removal leads to symptoms comparable to those which we regard as characteristic of lessened secretion (hypopituitarism) in man."

I do not want to leave the subject of Dementia Praecox without speaking of the work that is now being done by Much and others with the cobra venom.

F. Bauer, M. D., in an article in the *Munchener Medizinische Wochenschrift* for July 6, 1909, on "Special Reaction in Blood in Umbilical Cord," in speaking of the serum reaction in the insane and in the new-born, says that he has found the same reaction which Much found in the insane and called the "psychoreaction," in the blood in the umbilical cord of 14 out of 17 infants examined, while there was no trace of the reaction with the serum of 25 older children.

At one of the last Congresses, Drs. White and Ludlam, of Philadelphia, referred to Much's line of work. Much has published a method based on the inhibiting action of blood serum in cobra hemolysis, whereby he differentiates dementia praecox and manic-depressive insanity from other mental diseases. Drs. White and Ludlam claim that they are able to differentiate dementia praecox from melancholia, by a method based on the determination of the fixation of complement of

guinea-pig serum by the serum of the patient. Many authorities have corroborated Much's test which seems positive in cases of dementia praecox.

J. A. Hirschl and O. Potzl, in the *Wiener Klinische Wochenschrift*, Vienna, for July 8, 1909, in an article on "Serum Reaction in the Insane," report a number of tests of the hemolytic reaction to which Much has recently called attention as specific for the serum in certain forms of insanity. Their experience with fifty cases has confirmed the peculiar high resistance to hemolysis by cobra venom in cases of dementia praecox of the catatonic and hebephrenic forms.

Dr. L. Omorokow, in an article in the *Berliner Klinische Wochenschrift* for October 11, 1909, on "Prevention of Cobra venom Hemolysis in the Insane," says, "By perfecting the methods of investigation, Omorokow has obtained nearly constant results and has found that normal hemolysis occurring on the addition of cobra venom to human blood serum is absent in serum of patients suffering from mental disease of whatever type it may be. The same reaction occurs in placental blood. Out of fifty-three cases of mental disease, the majority of which were dementia praecox, this reaction was absent in only four."

(To be continued in the January issue.)

ACUTE TONSILLITIS.—After classifying together the most important post-anginal troubles, Dr. Schoenemann (*Korrespondenz bl. f. Schw. Aerzte*, No. 9-14) criticizes the hypothesis that the infection causing angina or tonsillitis acuta starts from the surface of these glands, referring to previous investigations, according to which the tonsils are merely sub-mucosal glands, of which the chief function is to fulfill their tasks in internal cell activities after the fashion of other adenoid tissues. The region drained by these glands is, according to clinical and experimental investigation, the mucous membrane of the nose. The acute tonsillitis, therefore is acute inflammation of a lymph gland, and the infectious agent travels from the nasal cavity. In the matter of treatment, the author follows traditional usage,—large doses of salicyl and sweating; prophylactically, local care of nasal conditions and regular instillation of 2% protargol or 5% collargol into the nostrils.

EDITORIAL

THE VISITING DOCTOR.

IT has been our experience on several occasions to attend patients who happen to have some particular friend in the medical profession. Said friend has usually been so friendly that it is with the greatest difficulty that he can restrain his love and anxiety for the patient by remaining away from the house longer than twelve or twenty-four hours. It is not long as a rule before he becomes a clandestine medical adviser and disrupter of sickroom organization. As the illnesses involved are usually either dangerous or lingering, the morale of the sick room and the peace of mind of patient and family are most important factors. The patient's welfare is, therefore, hazarded by his so-called friend.

It is not an easy matter to decide how to deal with the disorganizer. If a close relative, he certainly has some rights by family ties; even then, it is his duty to deport himself decently, and do to others as he would have others do unto him. If he is not decent, we fail to see how he can be made to become so, for the man who has not the instincts of a gentleman can never be made to act as one.

If he is permitted to continue his quasi friendly visits, there is almost a dead certainty that the attending physician will be discharged ere long. If the latter requests him to cease calling because of his disorganizing influence, ill feeling is created in the family. If there were any certainty that he would act honestly and work for the good of the patient, the problem might be solved by bringing him into the case as one of the attendants or consultants. The situation at the best is a disagreeable one. Occasionally, the difficulty is brought about by the fussiness of relatives themselves, and the situation is as unpleasant to the "friendly doctor" as it is to others connected with the case.

ANTI-TYPHOID VACCINATION.

DURING recent years the possibility of bringing about an immunity to typhoid fever by vaccination has attracted a great deal of interest among sanitarians and especially among the physicians associated with the military department of the United States and other nations. Typhoid fever has been the scourge of armies in every war of recent years. During the Spanish-American war there occurred 20,738 cases of typhoid fever among 107,977 men with 1500 deaths. In the Boer war the English had 31,000 cases with 5,877 deaths; and during the Franco-Prussian war the Germans had 73,398 cases with 8,789 deaths. It will be seen from these figures that typhoid fever is more dangerous to an army than the bullets of the enemy, and a solution of this problem would add greatly to the efficiency of an army.

Dr. George B. Foster, Jr., of the U. S. A., has made a careful study of the subject of anti-typhoid vaccination in the United States Army, and in a recent article in the *Journal of the American Medical Association*, has described the technique employed and the results that have been obtained.

The vaccine is prepared by growing a non-virulent strain of the typhoid bacillus on agar for eighteen hours. The growth of organisms is then scraped off and emulsified in sterile salt solution. The emulsion is standardized and sterilized and put up in sterile glass ampoules. A complete vaccination consists of three inoculations of ten day intervals. The vaccine is administered hypodermically, giving 0.5 c.c. as an initial dose and a full c.c. at each subsequent inoculation. Following the inoculation a hyperemic area about the size of the palm of the hand develops at the point of injection. Systemic symptoms such as slight fever and rheumatoid pains may present themselves, but these symptoms usually subside within twenty-four hours. In a series of 31,000 inoculations no serious results have occurred. The laboratory researches indicate that the resistance of the body to the typhoid bacillus is positively increased after the vaccination. Practical experience, however, is necessary to demonstrate the efficacy of this method of protection against typhoid fever, and Dr. Foster has cited a series of cases that seem to throw considerable light on this point. On June 14th, 1910, 92 members of an engineer corps received a series of anti-typhoid injections. Of the remain-

ing 26 men of the command two gave a history of having had typhoid fever, and by virtue of that fact were considered immune. This left 24 men out of a total of 118 who had not acquired an immunity to typhoid fever either by protective inoculation or by previous attack of the disease. On October 11th, shortly after the troops returned from the Gettysburg manouvers, two of the uninoculated men developed typhoid fever, and during the next two weeks four more cases developed among the uninoculated. Not a single case occurred among those who had received the preventive inoculations, while 25 per cent. of the non-immune, living under exactly the same conditions, succumbed to infection. Results such as this would seem to indicate that we have in this measure a method that will go far to prevent the serious losses that have occurred among armies from this disease during past years. If the future results obtained in the army are as conclusive as in the instance above cited, it is probable that the same method of immunization will be much more widely utilized in civil communities, especially where epidemics of typhoid fever are prevalent.

THE RELATION OF HEREDITY TO CANCER.

THE question as to hereditary influences producing a predisposition to cancer has been one that has been warmly debated for many years. In a recent article in the *Journal of the American Medical Association*, dealing with this subject, Twyzer, of Boston, calls attention to some facts that are interesting and instructive.

In considering the relation of heredity to cancer it is necessary to remember that only intrinsic factors affecting development can be considered as the result of hereditary influences. Extrinsic factors, such as chemical irritants, exposure to the X-ray and mechanical injuries can with difficulty be excluded as etiological factors, and thus the question is made a complicated one in many cases.

When we come to study the statistical reports that have been published bearing on this subject, we find a great difference of opinion to exist. Paget was an ardent advocate of the importance of heredity in cancer, and many years ago claimed to have shown the greater incidence of cancer in families of can-

cerous patients. The more recent statistics seem to controvert this, however; thus Pierson, studying the history of 2,368 cancerous women, found that there was no evidence that inheritance played any important part in the disease. Guillot and Bashford arrived at a similar conclusion as the result of their investigations. A great deal has been made of the fact that many members of certain families have been known to be affected with cancerous growths. Such instances, however, are extremely rare, and the opinion of most investigators seems to be that such occurrences may fall within the law of probability. It must also be borne in mind that if the occurrence of cancer in families is established, it cannot be considered as absolute proof of a hereditary cause, for peculiarities in environment are not eliminated.

The results of modern investigation of this problem would seem to indicate that heredity is not an important factor in the development of cancer, although it cannot be stated that the question is definitely settled. It is probable that experimental work on animals will do more to finally decide the matter than data based on the occurrence of cancer in human beings.

THE DYSPEPSIA OF OLD AGE.—W. S. Fenwick finds that out of 100 persons over 65 years of age suffering with chronic dyspepsia, 66 of the cases are secondary to organic disease of some important bodily organ, while 34 owe their symptoms to a progressive degeneration of the secretory structures of the stomach and bowel. In the former class the digestive disorders usually take the form of a chronic gastritis, due to disease of the kidneys, prostate, heart, lungs, liver, pancreas, chronic gout, or inefficient mastication; while about ten per cent. of the entire number are due to long continued hypersecretion from chronic ulcer in the vicinity of pylorus, gallstones, or diseased appendix. The pathological changes are traced, and are found to be more constant in women. Flatulence is the most constant symptom of the complaint. It is particularly severe at night. Constipation alternates with diarrhea. The main indications for treatment are to correct the subacidity and to relieve the flatulency and constipation. Large doses of diluted HCl may be given twice a day after meals, combined with a dram and a half of glycerin. Pepsin is useless. Metchnikoff's sour milk is undoubtedly one of the best means of relief. Malt preparations are of service when the intestine is particularly at fault. The usual bitter tonics had best be omitted, as they are apt to aggravate the condition. The new alcoholic essence of peppermint is of great service. One teaspoonful may be given in a sherry glass of water for an acute flatulent condition. For the constipation salines and mineral waters are to be avoided and recourse had to a mixture of cascara and maltine, a confection of sulphur and guaias, an occasional dose of gray powder.—*The London Medical Lancet.*

GLEANINGS

IODINE: ITS MOST IMPORTANT AND LATEST USES.—While looking over the literature of iodine in genito-urinary diseases, I was impressed by the multiplicity of uses of this drug in medicine and surgery. The literature is so voluminous (large papers having been written on its use in single conditions), that it would be futile to attempt to describe all of them in detail. I feel, however, that it will be of a great advantage to have its most important and latest uses in a single paper, so that they may be referred to with despatch.

In the following pages I shall dwell only upon the uses of iodine and not the iodides.

USES IN GENERAL SURGERY.

1. *Preparation of the Skin Prior to Operation.*—While this method is attributed to A. Grossich, the author has found in the literature two instances in America where tincture of iodine as a skin disinfectant before operation was spoken of. While Grossich, and later Guibe, deserve credit for a systematic study of this method in a large number of cases, its priority may be open to discussion.

Method: Shave the skin dry and paint with tincture of iodine before operating. Do not use water or other solution immediately before using iodine. Over 220 cases, no infection.

Waterhouse recently recommended painting the entire scrotum and penis with 2% iodine in spirits at any operation where he thought it likely that they would be uncovered, as in hernia, and any laparotomy in children.

2. *Disinfection of the Surgeon's Hands.*—Senn quotes Roux as the first to make use of tincture of iodine in hand disinfection. Roux dips his fingers in the tincture to disinfect the nails and adjacent parts where folds are otherwise reached with difficulty. Mikulicz and Senn adopted Roux's method. I used this method for some time, but did not know who recommended its use until recently. It is excellent where gloves are not used, and here Senn praises it highly.

3. *Postoperative in Joints.*—Tatchell claims good results from swabbing out joints after operation. Heuses, the iodine liniment of the British Pharmacopeia, consisting of iodine 5 pts., potass. iodide 2 pts., glycerine 1 pt., alcohol 40 pts.

4. *Tuberculous Lesions.*—Finocchiario in 1908 reported 12 cases of tuberculous epididymo-orchitis in which he injected a 1% aqueous iodine solution and claimed good results in all. He reports 3 cases in detail. He claims it transforms the lesion into a fibrous mass. He uses about 30 injections. This method, in my opinion, should be limited to those patients with no renal or pulmonary infection, who refuse operative interference for their scrotal lesions.

Belfield in 1892 injected a 5% aqueous solution of iodine trichloride in tuberculous epididymitis. He also used it in vesical tuberculosis as a topical application. This, in my opinion, should be reserved for inoperable cases.

Durante in 1894 used hypodermatic injections of iodine in tuberculous adenitis, arthritis and other tuberculous processes, and claimed good results. He used 1 c.c. of his 1% solution hypodermatically daily and increased the strength to 5%, extending the treatment over six months. His formula was: iodine, 1 to 5 pts.; potass. iodide, 10 pts.; water, 100 pts.

5. *Sinuses*.—Willard recommended iodine injections into sinuses to aid their closure. I can confirm the good effects, but I believe the bismuth injections supersede this method.

6. *Boils*.—Claret paints once daily with iodine 4 pts., acetone 10 pts. I believe other methods are more effective, e. g., pure phenol on wooden pick followed by salicylic acid ointment.

7. *Healing of Aseptic Wounds*.—Schantz recently claimed that when a healing wound has a slight irritation it heals with the least width of scar. He paints a healing wound on the third and on the fifth day, with tincture of iodine. Large wounds he paints once daily, and claims almost threadlike scars.

Theoretically, close coaptation should make a good scar, providing no infection ensues. Schantz believes the coat of iodine draws the already approximated surfaces still closer together. Waterhouse recently recommended painting all wounds such as those of colostomy, cecostomy, etc., that were liable to be infected, with iodine solution, 2% in alcohol. I never use iodine on an aseptic wound, but I believe that Waterhouse's method is good.

8. *Miscellaneous*.—These uses are so numerous that credit cannot be given to the authors thereof, neither do I believe it possible to mention the majority of them.

Gunshot Wounds.—Swab the tract with tincture of iodine after the removal of the wad or bullet and pack with gauze wet with tincture of iodine. One can feel reasonably sure of preventing tetanus infection if this is done early. If the case is seen late, lay the tract wide open, swab liberally with tincture of iodine, and pack with iodine gauze, but also give antitetanic serum.

Dog and Other Animal Bites and Scratches.—Here we have a good field for the tincture and it should be used freely.

Irrigating Wounds.—Popoff uses 1-10,000 iodine.

Septic Wounds.—Use tincture of iodine, iodine gauze and any wet dressing but phenol or bichloride of mercury. I have not been very successful in treating these cases with hyperemia.

Fresh Lacerated Wounds.—I paint the torn surfaces freely with tincture of iodine, after bathing with hydrogen peroxide, and then suture. The results are good.

Bursitis, Synovitis and Sprains.—Tincture of iodine and pressure bandage.

Tenosynovitis.—Tincture of iodine along tendons and immobilization.

Sloughing Tumors and Stumps.—Paint well with iodine before operation.

Subdermal Administration of Medicine.—Before piercing the skin with

the needle, paint the skin with tincture of iodine as recommended by Cannaday.

Ulcers.—Rooop recommends painting ulcers with tincture of iodine on and around lesions if granulations are unhealthy and foul. The zinc-oxidegelatin dressing of Unna is an excellent adjuvant.

Venereal Sores.—Here I believe we have one drug that is excellent. After using iodine, I dust with one of the iodide powders, as thymol iodide.

Bubonic Abscess Cavities.—These cavities clean up earlier if swabbed well with tincture of iodine.

Spina Bifida.—Injections of Morton's fluid, formerly much used, is often indicated in inoperable cases.

Hydrocele.—Injection of tincture of iodine after aspirations, is useful but more painful than the injection of phenol. The open method is best because the sacs may be multiple as in a case where I found four distinct sacs.

Infected Ingrown Toe-nail.—Pack with tincture of iodine gauze, after treating with tincture of iodine locally.

Preparation of Catgut.—Claudius introduced this method. The raw gut is soaked in a solution of iodine, one part, potass. iodide one part, water one hundred parts, for eight days, and then transferred to phenol solution. This gut is used very extensively. Its drawback seems to be its lack of tensile strength and its inadaptability for certain work. Moschcowitz has modified Claudius method preserving the gut dry after the iodine bath. McDonald very recently mentioned an iodine-acetone method of sterilizing and preparing catgut so as to obviate some of the shortcomings of Claudius' gut.

USES IN GYNECOLOGY.

Puerperal Sepsis.—Here Cabanas paints the cervix and uterine mucosa with a 4% aqueous solution of the tincture twice daily.

Plastic Parametritis.—Here Cabanas uses the same method as above and reports 35 cases of this condition and puerperal sepsis with good results.

Cannaday irrigates the uterus with 1 to 1,000 solution. Pryor, and later Burtenshaw, used iodoform for its iodine content as a packing into the uterus and cul de sac, without brilliant results. I do not know whether iodine gauze has ever been used after the original Pryor method, but it appears to me that it may be better.

Chronic Endometritis.—After curettage paint endometrium with Battey's fluid.

Ulcers and Erosions of Cervix and Endocervicitis.—Paint with tincture of iodine or Churchill's tincture.

Gonorrheal Endometritis and Endocervicitis.—Iodine has been highly lauded of late in the treatment of these conditions. After a fairly large experience in treating gonorrheal conditions, I would be reluctant to abandon the use of the silver salts as a routine treatment. Exceptional cases may provide indications for the use of iodine.

Ovarian Cysts.—Alison in 1846 used an injection of tincture of iodine

into the sac. This is not alone bad surgery, but positively dangerous, for Wood reports from the literature a death after the use of this method.

USES IN THE MOUTH, NOSE AND THROAT.

Pyorrhea Alveolaris.—Butler recommends it here. Of course, scraping and other treatment is also necessary for good results in this most obstinate disease.

Atrophic Naso-pharyngitis.—McKenzie recommends tincture of iodine after cocainization.

Acute Tonsillitis.—Floersheim recommends the tincture to the tonsils to either abort an acute case or reduce its severity. I have seen some good results in this condition.

Chronic Hypertrophy of Tonsils.—Slow and not satisfactory.

Dental Caries.—Tincture of iodine with aconite as a local application often gives relief from pain.

Other uses in the mouth and throat are along the line of general surgical principles.

USES IN DERMATOLOGY.

The use of iodine has been rather extensive in this field. In this connection see the paper in the *American Journal of Dermatology* for December, 1905, by Kinnaman.

Blastomycosis and Actinomycosis.—The late Nicholas Senn used iodine by cataphoresis in a case of blastomycosis and also in one case of actinomycosis with excellent results.

USES IN MEDICINE.

Typhoid.—Campanelli recently injected one centigramme of iodine daily in Durante's formula (vide supra) with Durante's method and after six days his cases entered into convalescence. It may act here to increase leucocytosis as in the joint and gland cases spoken of above.

Dysentery.—Sajous recommends Lugol's solution, one drachm to one pint of water as a rectal injection. night and morning.

CONCLUSIONS.

In iodine, we possess a very potent drug. Its antiseptic power has been conclusively proven by Kinnaman, from whose original paper I quote:

1. From 0.2% to 1.0% iodine is an antiseptic of marked potency.
2. It is far superior to bichloride of mercury. Two per cent. solution killed streptococcus pyogenes in two minutes.
3. (a) It is easily prepared and is stable.
- (b) It is one-fourth as toxic as bichloride of mercury.
- (c) It does not coagulate albumen.
- (d) It is effective in very brief time.
- (e) The stain soon disappears (easily removed by aqua ammonii).
- (f) It is very penetrating.

4. One-half of one per cent. is strong enough for all purposes as an antiseptic.

Nicholas Senn was a strong advocate of iodine in surgery. In his valuable article his conclusions are:

1. Iodine is the safest and most potent of all known antiseptics.

2. Iodine in proper dilution to serve its purposes as an antiseptic does not damage the tissues; on the contrary, it acts the part of a useful tissue stimulant, producing an active phagocytosis—a process so desirable in the treatment of acute and chronic inflammatory affections.

3. In the treatment of simple hyperplastic goiter, actinomycosis and blastomycosis the local use of iodine is made more effective by cataphoresis.—J. L. Wollheim, M. D., *American Journal of Surgery*.

PRE-CARCINOMATOUS DISEASE.—Orth, in considering the state of health preceding cancer, says: "The histogenetic development of this morbidity is well known, the cancer-cell being a descendant of epithelial cells; why this happens or can happen is a thing not yet quite plain. The search for parasitic causes has not augmented much the sum of our knowledge, but a fact of some import is that, in all cases where cancer has evolved, there have been antecedent local changes, pre-carcinomatous phenomena, in evidence. Of these, and of the greatest importance, are cicatrices of every sort,—syphilitic, lupous, scars from burns, amputations, from the punitive whiplash of some legal systems, cancer developing at various points on the dorsal surface of the criminal and, as a fact not to be forgotten, the period of time when the transformation of healthy tissue into carcinomatous became unmistakably evident to the patient, has frequently been very long after the formation of the cicatrix. Invariably, the cancer has origin in pathologically new-formed epithelium, particularly evident when it is derived from fistulas or from ulcers on the legs. Examples of cicatricial carcinomata are also the gastric neoplasms, growing upon the base of a gastric ulcer; that this relationship is frequent, the records of pathologic anatomy incontrovertibly prove. Another pre-cancerous alteration is the shriveling of connective tissue in parenchymatous organs, an illustration of which is the hepatic cirrhosis accompanying cancer of the liver and, indubitably, preceding the neoplasm. Mechanical and traumatic irritants are also of great import; the significance of the former being interpreted by vaginal cancer developing at the point of pressure from a pessary, whilst traumatic genesis is shown in the orbital growth where an artificial eye rested. From a single, unrepeatable trauma (as from a knife-thrust) cancer does not develop, though such injury may notably aggravate an existing growth, but it appears under the influence of repeated, slight traumatic forces, *e. g.*, cancer of the tongue from continued irritation due to a jagged tooth. Chemical irritants likewise play a part, as in cancer of the gall-bladder, of the urinary bladder when stones have formed; cancer where paraffin, anilin, naphthol, etc., have been plastically employed; here, also, belong the new-growths from application of the Roentgen ray, papillomatous proliferation preceding the neoplasm; further, as pre-cancerous disorders, kraurosis vulvae and leucoplakia are to be included. The cancer developing after lupus, both florid and cicatricial, is the result—or sequela—of an infectious-toxic activity, related to the toxicoparasitic effect of the

ova and larvae of ditoma as a cause of carcinoma. Cancer growing in the vicinity of other tumors, such as myoma, sarcoma, polypi, is to be considered as resulting from these other and primary growths, which, exercising some special, probably chemical, action upon cells, have given impetus to the deadlier new-growth. In the facts thus collocated, the parasitic theory finds no support, and the supposition that embryonal disturbances explain the evolution of cancer foci is, at least, worthy of contradiction. How the various genetic factors exert their powers cannot, because of the long interim between their action and the appearance of the neoplasm, be learned by observation of the afflicted individual, but only from experimentation. Hence, the most important business of the experimental investigators of cancer is to produce, at will, primary cancers."—(*Muench. m. Woch.*, No. 22.)

HYSTERIC SYMPTOMS.—Dr. H. Goldblatt in the *Munch. med. Woch.*, 22, mentions two symptoms not, hitherto, emphasized, but which he has found in many individuals of the type usually dubbed "hysteric." One of these keynotes is subjective in nature, the patients complaining of a most disagreeable sensation of dryness in the mouth, sometimes in the throat. This symptom, which, so far as the author knows, finds no mention in the literature, has been the most frequent symptom complained of in the buccal region. It is often associated with globus, and in patients displaying the most complete and characteristic symptom-complex, it is seldom absent. Whether it is a matter of paresthesia—in the sense of a disturbance of sensorial powers or, possibly, a decrease in the secretion of saliva (sometimes observed in the hysteric), is not known. The subject, however, is worth further investigation. The second symptom,—mention of which has not been found in hysteric literature, is a vaso-motor phenomenon capable of objective apperception. The flushed cheek of the hysteric patient has—in a great number of cases—an edematous appearance and, further, a somewhat bluish tint. If this sign is characteristically in evidence, the observer will receive the impression that the hysteric individual has applied a suitable stratum of bluish-rose face-powder to the area mentioned. If, at first, it is not particularly noticeable, the symptom may be induced by means of some slight local irritation (gentle stroking, tapping) or by relating some sentimental figment of the imagination. This bluish-rose, slight tumefaction localizes, as a rule, on the two cheeks; often, also, in the median line of the forehead; sometimes it appears over the whole face; rarely,—in the severest attacks of hysteria—it is one-sided. Possibly, it is just this vaso-motor phenomenon, associated with the peculiar expression of the face that lends a characteristic look to the patient, now and then permitting a diagnosis at the first glance. In neurasthenic and depressive states, this phenomenon has not been observed, though sometimes noted in non-hysteric, neurotic women during the menopause. It may be considered heterodox to mention, nowadays—when the old-time hysteric stigmata are thrown aside—these new ones, but 200 instances where these phenomena were present, are on the author's records, and are considered valuable characteristic and differential indications of protean and still unexplained hysteria.

RECENT NOTES ON INHERITED SYPHILIS.—Immunity of the mother, unless latent lues is already existent, has not been demonstrated. It may happen that the mother of a child inheriting the disease from a syphilitic father, remains healthy. In such case, she is not passively immune. Immunity in case of exposure means that the individual is luetic. Every nurse should have a serologic examination for the infection. A positive reaction in a child unmistakably luetic may be got only several days after its birth, so that caution must be exercised in acceptance of negative results. Maceration of the infant is always suspicious. Therapeutically it is not possible to change a positive into a negative reaction by a course of mercury. A specific treatment on the ground of positive reaction in an apparently healthy already treated woman is not necessary, but the case is otherwise for the woman who comes under the jurisdiction of Colles' law. The apparently healthy woman, reacting positively, and mother of a luetic child, has latent lues, and should be treated therefor. Similar is the treatment recommended of an apparently healthy child born of a syphilitic mother.—Dr. Frankl, *Munch. med Woch.*, No. 25.

TUBERCULOSIS IN THE PHILIPPINE ISLANDS.—It is the opinion held by most persons who have not lived in the tropics that tuberculosis is less prevalent there than in the temperate zones. This, however, according to Dr. Isaac W. Brewer (*Journal of the Outdoor Life*, September, 1910), is not true of the Philippines. Brewer states that the deaths in those islands from tuberculosis outside of Manila in 1907 was 210 per hundred thousand, as against 172 in the registration area of the United States, for instance, and that the death-rate from this cause in Manila during 1908 was 486 per hundred thousand, as against 89 for the city of St. Paul, Minn. He says that if there is any virtue in sunshine and fresh air there should be but little tuberculosis in those islands, as the climate is rarely so severe even in the rainy season as to compel the inhabitants to keep their houses closed. The habits of the Filipino, however, are such that fresh air is usually lacking in his residence. The rarity of tuberculosis among cattle in the Philippines indicates that the climate itself cannot be responsible for this disease among the natives. Dr. Brewer's study shows that the same causes are operative as apply elsewhere—bad hygienic surroundings, poor food and improper clothing. The houses of even the better classes are lacking in ventilation and are kept religiously closed during the day to exclude the heat and also at night because of the belief that the night air will cause fever. An actual count of 200 houses in Manila at midnight showed that less than 25 per cent. had the street windows open, and in many there were no windows in the bedrooms. It is not uncommon to find horses and other animals kept in the lower floors of the best houses in Manila. The poorer natives in both the cities and the provinces live in thatched cottages which seem to be well ventilated, but on closer examination it is found that the windows are closed during the greater part of the day and all night; the space beneath the houses is occupied by hogs, goats and cattle, and beneath the kitchen will be a filthy hog-wallow, into which is thrown the refuse from the house. The Filipino is a great chewer and spitter and he expectorates wherever most convenient. There is also a habit of exchanging partially smoked cigarettes and cigars, which undoubt-

edly is a means of conveying the infection of tuberculosis. In addition, over 90 per cent. of the natives are the hosts of intestinal parasites, which, while they may cause no special symptoms in themselves, predispose their host to other infections, particularly tuberculosis. The average native is poorly nourished, living mostly on rice and fish, with occasionally pork and rarely beef, together with a few roots, fruits and green vegetables. The clothing is mostly cotton, which in the rainy season remains damp; shivering natives are a common sight. Except in the larger towns there is a great lack of medical attention, and indeed few towns could support a physician. Brewer believes that the inhabitants would readily avail themselves of hospitals or dispensaries and that much good could be accomplished by the American government by the establishment of such institutions in the small country towns. He thinks that an enthusiastic physician with a few good trained nurses and a supply of drugs could accomplish wonders. An active campaign of education must be instituted, but the methods adopted must be different from those adopted in other countries because the people are not so far advanced in their knowledge of hygiene.—*Jour. A. M. A.*

CHRONIC GASTRIC ULCERS.—Bolton recognizes four pathological conditions of chronic gastric ulcers: Primary acute gastric ulcer, which is well known to be produced in several ways. Such ulcers run through the same stages as experimental ulcers do and heal in from three to four weeks, depending upon the size and depth of the ulcer. Multiple acute ulcers are liable to lead to some contraction of the stomach. These ulcers commonly produce no symptom unless a vessel is accidentally opened up leading to hemorrhage, or the ulcer perforate. When the vessel which has been opened up is not occluded by a clot, or when the clot has broken down and the hemorrhage is repeated, the ulcer may completely heal except for a hole in the centre leading into the vessel. On the other hand, their presence may be associated with an attack of gastric pain and vomiting, which, however, is never so severe as in the chronic form of the disease. Such acute ulcers are liable to occur at intervals in the same patient. In the absence of any obvious bacterial or other infection, which are known causes of this malady, a careful search should be made for a local source of infection such as pyorrhœa alveolaris, chronic appendicitis, suppuration of the sinuses, vaginal discharge, and so on. 2. Primary acute gastric ulcer with delayed healing (subacute gastric ulcer). The delay is brought about largely owing to motor insufficiency of the stomach, leading to necrosis of the granulation tissue of the base and excessive fibrosis of the same. Cicatrization is seen at the edges of the ulcer, which are quite smooth. The base is smooth and filling up, but active digestion in the centre may go on while cicatrization is proceeding and give rise to hemorrhage late in the course of the disease. Considerable scarring of the stomach may result. The clinical history extends over a longer period and the symptoms are more pronounced than in acute ulcer, which heals in the usual time. 3. Chronic gastric ulcer. This ulcer is characterized by the absence of signs of tendency to heal, and also by its gradual extension. The base is usually thickened and excavated in the centre and the edges may be overhanging owing to digestion of the connective tissue

under them. Whether this ulcer arises by a further process of delay so that the healing is completely stopped, in which case digestion of the base necessarily follows, must remain for the future to decide. 4. Secondary acute ulceration. Exactly how a chronic ulcer extends is a very interesting and important question. It may be that by acute exacerbations affecting the surrounding mucous membrane more or less extensively a chronic ulcer gradually increases in size. It may also increase in other ways.—*The Practitioner.*

CLINICAL IMPORTANCE OF LIME.—Meyer has been studying in various ways the action of lime in the organism, and states that one of the best ways to obtain an insight into the action of a certain element in the protoplasm is to study what happens when this element is rendered inactive. This can be done in respect to lime by giving oxalic acid, which seems to draw the lime out of the tissues or else to bind it or in some other way to render it inactive or nullify its action. Januschke has found that in experimental oxalate intoxication—not only the toxic paralysis of the heart, but also general intoxication—can be arrested by administration of lime or strontium salts. This does not occur when barium salts are given, although the latter are able to bind the oxalates *invitro* as effectually as the lime salts. The effect is due not to the binding of the oxalate, but to the supplying of the tissues anew with lime to replace that which has been drawn out of them by the oxalic acid. In every intoxication from an acid the lime is drawn out of the tissues, he asserts, and the lime content of the blood increases. Among the symptoms of oxalic acid intoxication are salivation, alternate maximal dilatation and contraction of the pupil and alternations of a very high and very low blood-pressure—all suggesting increased irritability on the part of the nervous system from partial loss of the lime content of the nerve tissue. This assumption is confirmed by the increased sensitiveness to suprarenal extract of the organs innervated by the sympathetic system, as well as by the subsidence of the symptoms under administration of lime. Another phase of the physiologic action of lime has been shown by the different behavior in respect to exudates and transudates when animals are given lime. The effusions and edematous transudates observed in animals after inoculation with diphtheria toxin, mustard oil, etc., do not occur in animals previously treated with lime salts. This suggests that the increased proportion of lime in the body has rendered the vessel walls less permeable. This assumption is further confirmed by the experiences with experimental exanthems with effusion, easily induced in the non-treated animals, but failing to develop in the animals previously given lime. Wright ascribes this to increased coagulability of the blood under the influence of the lime salt, but Meyer thinks that it is much more likely to be the result of changes in the walls of the vessels of the skin. The same explanation applies also to diarrhea, the result of abnormal permeability of the intestinal vessels. The research reported supplies a physiologic foundation for the sedative action of lime on the organic nervous system and for the correction of the tendency to effusions and transudates by lime salts rendering the vessel walls less permeable.—*Münchener Med. Wochenschrift.*

SPONTANEOUS RUPTURE OF THE EYEBALL.—The author reports the spontaneous rupture of a glaucomatous eye in a man 68 years old. The eye was enucleated and the pathological condition found to be as follows: Microscopically a section in the antero-posterior diameter shows a hernia of the ocular contents through the center of the cornea. The retina and choroid are detached except at the nerve head, and these tissues make up the mass of the hernia. The space between the sclera and the detached choroid and retina is occupied with blood. The head of the nerve shows deep cupping. Microscopically the corneal tissue shows inflammatory changes of marked degree. The tissue is oedematous and there is a great increase of cellular elements. There is no necrotic material such as one would find in an ordinary ulcer. The arteries of the limbus region show the same changes; the new cells here are mononuclear cells. The arteries of the limbus region have markedly thickened walls, and in one set of sections marked inflammatory changes are seen in the outer wall of a large vein (periphlebitis). The prolapsed tissue is made up of vitreous, iris, choroid and retina, and all of them are oedematous and full of blood. There is little to be made out of the study of the iris, choroid and retina, except the fact that the iris and choroid are the seat of a great increase of cellular elements, and the vessels show marked thickening of the walls. The most striking changes found in the tissue are the changes in the cornea and the changes in blood vessel walls. These changes probably explain the bursting of the eyeball and the hernia of its contents.—Dr. E. C. Ellett, *Annals of Ophthalmol.*

WILLIAM SPENCER, M. D.

A NOTE UPON PHLYCTENULAR AFFECTIONS OF THE EYE.—The authors mention the old theory that phlyctenular affections are tubercular, and speak of the revival of this idea. The main facts which have led to this change of opinion are:

1. The frequency with which a family history of tubercle can be obtained from the subject of phlyctenular disease.
2. The frequent co-existence, along with phlyctenular disease, of other manifestations of tuberculosis.
3. The fact, as shown by the experimental work of J. B. Nias and Leslie Paton, that the blood of patients suffering from phlyctenular disease behaves in a manner which is typical of a definite tuberculosis infection. As a result of examination of the blood in upwards of fifty patients with phlyctenular disease, these authors claim that their observations of the opsonic index go far to support the hypothesis that phlyctenular ulcers are due to the escape of attenuated or dead bacilli from some distant focus.
4. The positive result obtained by employing the Koch, Wolff-Eisner-Calmette-von Pirquet, or other specific test for tubercle.

Twenty cases were tested by the von Pirquet method, and a reaction obtained in every case. Fifty per cent. of these cases gave more or less obvious signs of tubercle, while 75 per cent. gave a family history.—Dr. Sidney Stephenson and Dr. J. A. Jameson, *Annals of Ophthalmol.*

WILLIAM SPENCER, M. D.

REPORT OF RECOVERY FROM CHRONIC SYMPATHETIC OPHTHALMITIS WITH

NORMAL VISION.—The case that of a man who had been struck in the left eye by a piece of steel. The wound healed, but inflammation set in one month later. Nearly five months later, he became a patient at the Wills Hospital, where the injured eye was enucleated. When first seen the patient presented the following conditions: Decided sclero-corneal congestion; photophobia; complete posterior synechia, the lens somewhat opaque from plastic exudates of the irido-cyclitis. The iris, throughout more than half of its circumference, was distended in the form of a vertical crescent by fibrino-plastic exudates, and was atrophied, the central portion of the lens clear. The vision was 15-200, the fundus hazy, and there was a small atrophic patch in the superior quadrant of the retina near the edge of the disk. Treatment after purging with calomel, consisted of mercurial inunctions in the right temporal region at night, hot moist compresses every two hours, ten minutes at a time, sweat baths three times a week, instillations of atropine and dionine three times a day, and occasional blistering of the right temporal region; potassium iodide in ascending doses until the stomach revolted at 60 drops, when it was discontinued for a few days; later, sodium salicylate was used with very satisfactory results. Five days after the beginning of this treatment the sclero-corneal congestion had slightly subsided and vision was 15-100. The improvement steadily continued until the vision and field were normal. The result has thus far been permanent.—Dr. George Friebs, *Ophthalmic Record*.

WILLIAM SPENCER, M. D.

TWO HUNDRED AND SEVENTY-FIVE CASES OF ECLAMPSIA.—HORN has examined the cases of eclampsia observed in the hospital at Christiana for ten years following 1889, and found 275 cases among 18,934 laborers, giving 1.45%. Until 1900 the treatment was largely expectant and medicinal. During this time the mortality remained without much change at about 23.3%. From 1900 to 1906 a more active treatment was used with rather more frequent use of early delivery, and the mortality was not much improved. Since 1906 the treatment was active, early delivery was much more frequent, being used in 46% of the cases. In these years the mortality fell to 16.6%, and at the same time the mortality of the children improved. The history of single cases also show that active treatment is advantageous. In certain cases it was found that a cautious waiting with symptomatic treatment might be used with advantage.—*Zentralbl. f. Gyn.*, 1910, 1121.

THEODORE J. GRAMM, M. D.

THE DIAGNOSIS OF EXTRA UTERINE PREGNANCY.—Thelin has shown that the four varieties of extra uterine pregnancy have the following symptoms:

1. Incomplete tubal abortion. Dull pains with repeated attacks of severer pains, accompanied by fainting and vomiting. Bloody vaginal discharge becoming more profuse after the attacks of pain, often brownish in color. Disturbances of micturition and defecation. Now and then discharge of decidua. General weakness and anaemia. Tumor in the pouch of Douglas, growing rapidly in addition to a tubal tumor at the side of the uterus, which is often difficult to differentiate from the hematocele.

2. Complete tubal abortion. Some attacks of acute pain. The general condition suffers but little; no anaemia. The haematocele is inconstant, and when present not large. Often only a free hemorrhage is found in the abdominal cavity.

3. Tubal rupture. Mostly a sudden catastrophe occurs. While in good health a severe abdominal pain, fainting, pronounced anaemia. Marked sensitiveness of the abdomen.

4. Tubal pregnancy with intact tube. Here the symptoms are delayed menstruation, a tubal tumor is present and from the vagina there is a dark, viscid bloody discharge.

In all cases the author advises immediate operation.—*Zentralbl. f. Gyn.*, 1910, 920.

THEODORE J. GRAMM, M. D.

THE ANATOMICAL CHANGES IN POST PARTUM HEMORRHAGE.—Labhardt has studied these in five fatal cases. The author says that the diagnosis of atony of the uterus is often wrongly made, since there is not always a functional, but an anatomical disturbance of the uterine walls, as his cases have shown. These anatomical changes consist of an increase of the connective tissue at the expense of the musculature, which brings about an insufficiency of the uterus and leads to severe and even fatal hemorrhage. This excessive development of connective tissue may be brought about by defective development of the uterus (hypoplasia) or there may be a proliferation of the connective tissue in consequence of metritic changes especially in older women, or there may be present scar like tissue changes of the uterine wall in consequence of injuries. It is hardly possible to make the diagnosis of this latter condition in mild cases, or if more serious we may assume the condition to be present from the ineffectiveness of the usual remedies bringing about uterine contractions, especially if other pathological conditions may be excluded. The author says in all these severe cases we should remove the uterus.—*Zeitschr. f. Feb. u. Gyn.*, Vol. 66, 374.

THEODORE J. GRAMM, M. D.

THE TREATMENT OF PLACENTA PRAEVIA.—Hauch has tried to formulate what the treatment should be from an examination of the material furnished by the Copenhagen Maternity. He advises against extraction in placenta praevia like after an ordinary version if the os is not entirely dilated. Rupture of the membranes he regards as an excellent method, if only it is sufficient; but this occurs only in mild cases and only under certain circumstances. The author considers treatment by means of rubber bags. The danger of infection is greater in their extraovular use than the intraovular. It is not necessary to hasten labor. If after version it is not possible to extract the child at once, it is proper on account of the danger of tearing the cervix to abandon all attempts at delivery and to allow the child to be delivered spontaneously. Also it is not advised in the interest of the mother to attach a weight to the balloon to increase the traction. It is also preferable to introduce the bag within the ovular sac. Traction upon the bag as by means of a weight is only advisable when called for by the hemorrhage or by the labor being protracted. The bag

should be large enough to insure an easy passage of the child through the os, namely, about four inches in diameter. The chances for the child are less in primiparae, in weak patients, and in placenta praevia totalis; they become worse the farther from full time, and are also bad for very large children. The proper use of the dilating rubber bags is the method most favorable for the child without endangering the mother as other operations do, except version according to the method of Braxton Hicks, wherein the danger of infection is somewhat less than from treatment by the bags. The latter method of version is better adapted to general practice, for it gives better results than an improperly conducted treatment by the rubber bags; and after all it is the life of the mother which is to be considered in the first instance.—*Monatsschr. f. Geb. u. Gyn.*, Vol. 31, 555.

THEODORE J. GRAMM, M. D.

THE PROPHYLACTIC ACTION OF NUCLEIN AGAINST PUERPERAL INFECTION.—Graff, of Wertheim's clinic in Vienna, has examined the question whether we may expect to improve the morbidity of the puerperium from the action of preparations of nuclein. Animal experiments have shown that the resistance to infection may be materially increased by prophylactic injections, while in the presence of existing infection the results were quite negative. In studying such a question as that proposed above two points must be considered: (1) the course of the leucocyte curve during labor and the puerperal period, and (2) the general reaction to nuclein preparations of women during these times.

It was formerly stated that there is usually a hyperleucocytosis during pregnancy, but in the light of more recent studies this proposition can no longer be maintained without certain modifications. Several recent studies of the subject have shown that there is no pronounced increase in the leucocyte count if the latter be taken before the beginning of labor pains, and Pankow has shown that there is no progressive increase during pregnancy, while Graff has had the same results. On the other hand, during labor and until several hours after delivery of the placenta there is an increasing hyperleucocytosis. In addition to individual variations, it depends also upon whether the patient be a primipara or a multipara. Thus Rieder found an increase in the number of white blood corpuscles in primiparae, but only in a certain proportion of multiparae; while others have found an increase during labor irrespective of the number of preceding labors. According to Zangmeister and Wagner the amount of increase of the leucocytes depends upon the duration of the labor and above all upon the intensity of the labor pains, which condition according to Hahl is brought about largely by the white cells collected in the enlarged vessels and lymph tracts of the uterus being pressed out into the general circulation, so that after the culminating effort of the uterus in the placental stage, the number is greatest.

As regards nuclein prophylaxis, its action must be considered with respect to two periods, namely, what is its effect during labor, and then at about the fourth or fifth day, when the more serious puerperal infections are so liable to occur. The attempt to increase the number of leucocytes during labor is not very promising for several reasons. Firstly, the hyperleucocytosis during labor is already so great that it cannot be exceeded by the highest numbers attainable in the nonpregnant. It is questionable

whether such an effect, even if possible, might not be harmful. Moreover, too much cannot be expected from such an exaggerated increase, since the dangerous pathogenic germs after all only enter the wounded area in the uterus during the puerperium, and the hyperleucocytosis continuing only for two or three days at most, would have but little prophylactic action. In examining the effect of nuclein injections after the disappearance of the physiological increase attending labor, it has been found impossible to again increase the number of leucocytes. Pankow found that on the third day the normal ebb could not be held up or changed to a flood tide by nuclein, but rather fell the more. From this interesting study, thus briefly outlined, Graff concludes that the original question under consideration must be answered in the negative.—*Zentralbl. f. Gyn.*, 1910, 900.

THEODORE J. GRAMM, M. D.

POST PARTUM HEMORRHAGE.—Foges reports the resume of the cases occurring in Rosthorn's clinic in Berlin during the last ten years among about 32,000 deliveries, and endeavors to obtain some idea of the number and severity of the occurrence, as well as the physiological and pathological conditions which predispose to hemorrhage. In all there were thirteen fatal cases; of these no case was ascribable to uncomplicated atony, but in six cases there was placenta praevia, four times premature loosening of the placenta, one was caused by severe tearing of the cervix from a Bossi dilator, one from nephritis, and in one instance a large placental fragment was the cause of the hemorrhage. Severe hemorrhage, under which are included those cases wherein a large amount of blood was lost and required treatment such as tamponade or extirpation, was observed in 124 instances, giving a percentage of 0.4. Most of the serious hemorrhages were observed after operative intervention, from retention of the placenta and lacerations of the cervix. Less severe hemorrhages occurred in 273 cases, and mild hemorrhage in 91 instances, making a total of 505 cases in 31,935=1.58%. Among the therapeutic measure tamponade was regarded with much favor, and yet was used only 90 times. Total extirpation, which was performed in six serious cases, was only successful in one case of premature separation of the placenta.—*Zentralbl. f. Gyn.*, 1910, 1090.

THEODORE J. GRAMM, M. D.

NEW STAIN FOR SPIROCHAETA PALLIDA.—Hoffman, reviewing the recent literature of this subject, remarks that the methods hitherto at command for the examination of spirochaeta pallida have the great disadvantage for the general practitioner that they consume too much time and require extreme care in their manipulation. Those difficulties are now suddenly resolved by Burri's Indian ink process, which combines the highest degree of speed and simplicity. A very small quantity of serum obtained by means of a pipette from the bottom of a chancre or a papula, is placed on an object glass, a small drop of a ten percent. solution of Indian ink is added and the two are intimately mixed and spread in a moderately thin layer over the object glass, and allowed to dry in the air. The microscopic examination shows the spirochaetes uncolored, and glistening in the transmitted light, upon an even brownish ground. The whole examination is said to take scarcely a minute; and Hoffman expresses the opinion that the process will shortly become the common property of every physician in the same way as the stain for tubercle bacilli.—*Berliner Med. Woch.*

Monthly Retrospect OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY A. LEIGHT MONROE,

Miami, Florida.

BROMIUM, 1X-2X.—WHOOPIING COUGH.—It appears that few, if any, physicians recognize the extraordinary value of this remedy in the treatment of this intractable affection. This fact appears the more singular, as its pathogenesis manifestly indicates its use in spasmodic affections of the bronchial portion of the respiratory tract. This is probably due, in a large measure, to the worthlessness of the remedy in stock because of its instability and tendency to rapid deterioration. The reliability of the drug must be insisted upon absolutely if its use is not to prove disappointing. Have it fresh and properly prepared and in the lower dilution, the 1x and 2x being found most effective by me.

The indiscriminate use of the remedy necessarily means some failures, but the dearth of characteristic indications or symptoms in the early stages of the disease has led me to an almost routine use of the remedy as soon as I am fairly sure of my diagnosis.

The only special indications that can be given you are, the aggravation late in the day and early part of the night, and also from the warm air of poorly ventilated room.

In association with bromine, belladonna and ipecac, are valuable intercurrents; belladonna for dry cough with the appearance of fever and ipecac, where there are excessive quantities of mucus with a tendency to vomit—both conditions are from bronchial inflammation resulting from taking cold.

An effective way to administer the remedy is to add 2 to 3 drachms of the 1x and 2x dilutions to 6 oz. of simple syrup—giving a teaspoonful from one to two hours.—*The Clinique*.

HOMOEOPATHY.—The principle upon which Homœopathy, which is simply a system of medication, is based, as I understand it, is substantially as follows: There is what experience has demonstrated to be a safe rule or law of nature which will guide the physician directly to the selection of a remedy for a patient's disorder before that remedy is ever used in disease. Its medicinal capacity is demonstrated beforehand. One difference between it and the traditional school is, the latter has waited for the individual to become sick and experimented upon him in that condition; whereas, Homœopathy makes its experiments, called provings, upon the normal persons and learns beforehand the powers of medicines and then goes forth to meet the diseases as they may manifest themselves in different individuals. We have by long and careful trials, under control of

judgment, by modifying the dosage, found out how agents affect the normal structures and functions. It is known that medicines can produce in the normal person states simulating those that come by natural processes so closely that no observer can distinguish between them without fore-knowledge or the history of the ailment.

Having determined the power that resides in drugs, observing the manifestations of a disease in a particular individual, how are we to select from our proven drugs the particular one for the ailment in hand? A drug whose disease-producing power was known had been observed to alleviate a natural disease showing forth the same or similar manifestations as itself. This had been observed casually for a long time, but not to the extent as to be regarded more than a coincidence, before the time of Hahnemann. Whether he rediscovered this fact, or took it as a special subject of investigation, I will not try to explain; but I do not know that he ever claimed the discovery. We hear a great deal about research in these days. There probably has never been a medical investigator who appreciated that science is to be advanced by research more than Hahnemann. He demonstrated by years of research and careful experiment that what had been passed by as coincidences seemed to be a principle of wide application, sufficiently wide, after working it out, to become the basis of a new *materia medica*. Why this general application of what we sometimes call the law of similars has not been accepted more generally I would not care to attempt to explain at this time. Neither can I explain just how it is that diseased states are corrected by the medical agent that produces their counterpart in the normal subject. There are theories enough about it, some of them plausible, but when the physicist discovers what gravitation, what attraction and repulsion are; or the chemist why chemicals unite according to certain and constant numerical groups; when the botanist explains why an oak is not a clematic, why one rose is pink, another white; or when the empiricist explains, even to his own satisfaction, why arsenic corrects certain anæmias or why digitalis affects the cardiac rhythm without a gap between what is known of these latter several causes and their particular effects, it may be demonstrated just how each particle of medicine affects for better or worse the vital cells.

I believe no one will deny that the action of similars is, sometimes, apparent. We maintain it is quite general, basing our confidence upon long years of experience and observation. No one denies but that it is just as effective against disease. We believe it to be a safe and sufficient system for prescribing, more scientific, more rational, more effective than any other. Of course, experience at the bedside, both by ourselves and by others, is the foundation for our practice. Either all Homœopathists are deceitful or their testimony is reliable.

Why do we maintain a college of Homœopathy? Anatomy, physiology, the microscopical studies, chemistry, biology, physics, surgery, the correcting of errors of refraction are not homœopathic. But agriculture is not chemistry, fertilizer, clay, loam or sand. The threshing machine and the gristmill, the oven or even the dough, are not bread. He who would know all about bread must study the botany of cereals, the chemistry of their constituents, and the adaptability of soils to wheat culture. He who would know all about the human being as a living organism, his functions,

minute structure, and all, in order to know what parts are diseased in a given case, must study a wide range of subjects called the medical curriculum. He who would cure the sick must know all this and, besides, have a very wide and exact knowledge of the correctives of disease and how to select them. Homœopathy is a system of medicine or, to be more exact, a system of medicines for use in disease. This is expressed in other words by saying it is a system of therapeutics and presupposes that its practitioners know as much as can be found out about the human body, upon which they practice, as a matter of necessity. Did they not know this, they would not be able, oftentimes, to detect diseases, especially those with insidious onset and slow, painless advance.

Among those who are ignorant of homœopathic principles, the notion prevails that its main doctrine is not to give medicine except in minutely small doses. The fundamental of Homœopathy has nothing, intrinsically, to do with the size of the dose of medicine given at a time or during the progress of a disease. Experience has shown us, as it is showing others now, that massive quantities of medicine mask symptoms and alter for the worse the vital economy of the one who takes them. Had I the time, I could make you smile at the comparison between the old-time dosage of the empirics and their present-day recommendations. The terms attenuated and diluted can no longer be applied to any man's dosage with ridicule; if what we read in all the text-books of the day is a sign of actual practice. It is a kind Providence that tempers the storm to the shorn lamb. It is a thoughtful doctor who recognizes that a body, already sensitized by disease, should not be aggravated by a shocking dose. The blows of a small hammer carefully and gently applied will drive a slender nail into a timber, when a heavy sledge hammer in the hands of Hercules cannot do it. A delicate dosage, repeated, as care may direct, will cure more disease than mixtures that are weighed out by avoirdupois.—Extracts from an address delivered by W. B. Hinsdale, M. D., at the University of Michigan. Published in the *Medical Century*.

TREATMENT OF INFANTILE TYPHOID FEVER.—As an introduction to the therapeutics of my paper, I would say that while the sensitive nervous system and the delicate immature tissues of the child are easily damaged, they are also readily amenable to the beneficent influence of our gently-acting remedies. The applicability of our antispasmodics is easily demonstrated in children's diseases; and, instead of our almost routine practice of Baptisia, Bryonia, Gelsemium and Rhus in the adult, we will do well to weigh the claims of such remedies as Sulphur, Psorinum, Bacillinum, and the like in the disease under consideration. Perhaps only as intercurrents, but we cannot afford to overlook them. Calcareo and Lycopodium are important also. None of these appeal to me below the 30x.

Baptisia is a remedy whose indications are not likely to be well brought out in very young children. The reverse is true of Gelsemium. I know of no fever remedy so frequently applicable in these cases. That blending of nervousness, muscular weakness and trembling; dullness, with heaviness of the eyes; perhaps some catarrhal symptoms, so common in these cases, responds nicely to Gelsemium. In my experience it will bear continued use and frequent dosage. I use it almost exclusively in the 1x.

Bryonia, anywhere from 3x to 30x, and occasionally 200, is perhaps my second most frequently used remedy. I believe it can be given continuously while it is indicated, though I think its action lasts longer and does not require so frequent repetition. Irritability, headache, dry mucous membranes, white-coated tongue, aggravation from movement, constipation or brown mushy or liquid, offensive stools; delirium of every-day life in sleep, are my leading indications. The characteristic thirst may or may not be present.

Occasionally Hyoscyamus has to replace Bryonia for a short time because the case is progressing into serious involvement of the nerve centers, as evidenced by more sopor, perhaps twitching of various muscles, picking at the bed clothes and grasping imaginary substances in the air, muttering delirium, subsultus tendinum and the like. The dryness of Bryonia, its irritability, its constipation or diarrhoea, may all be present with Hyoscyamus as the indicated remedy. 6x or 30x are good potencies. After improvement under Hyoscyamus it is usually proper to fall back to Bryonia or some other indicated remedy.

Rhus tox. 30x or 200 may be very useful when the Bryonia aggravation from movement is replaced by restlessness, with more or less apparent benefit from the movements for a time. Rhus tox. does not seem to require frequent repetition and its action is rather prolonged.

I have occasionally used Phosphoric acid with seemingly good effect when profuse, painless yellow stools, with distension and much rumbling in bowels, were the leading symptoms, the patient not seeming to be seriously affected thereby. This is not the classical place for the remedy in this disease, but it is the only fit I have seemed to be able to make of it. I am undecided as to the potency to recommend. I have mostly used it at about the 6x in such cases.

Sulphur, Calcarea and Lycopodium are to be thought of because of their particular constitutional application to the developmental stage of childhood and upon well-known indications. Remedies like Psorinum, Bacillinum, Medorrhinum, etc., because of probably inherited taints.

The proper homœopathic remedy will often abort the case and always simplify and shorten it, though we are likely to lose credit thereby, as a neighbor's child under Old School treatment gets sicker and finally recovers due to "exceptional skill" of the attendant, ours not getting sick enough to test our skill in the popular mind.—W. R. Andrews, M. D., *Medical Century*.

RAPIDLY DECLINING BIRTH RATE OF FRANCE.—Jacques Bertillon, the world-famous anthropologist, in an article published in *La Librete*, sounds an alarming warning to France in the light of her loss of population and constantly declining birth rate. Bertillon points out that although France, in 1851, had as great a population as Germany—each having 35,000 greater than any other country in Europe except Russia—she is now left with a population of 40,000,000 against Germany's 65,000,000 and Austria's 55,000,000. Dr. Bertillon declares to wipe out the name of a "dying nation," which France so richly deserves, Parliament should adopt Colonel Roosevelt's ideas on race suicide and pass a bill favoring marriages and large families.—*Indianapolis Med. Journ.*

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